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New Parasitic Weed Seen as Threat to Corn and Sugar Crop

Plant Comes From
Africa; Slows Growth
Of Important Crops

WASHINGTON, D.C.—Weed control specialists of USDA told Croplife last week that a "new and strange weed" has been found in the Carolinas, and that its presence poses a potentially serious threat to corn and sugar crops. Parasitic in nature, this weed, known as Striga, or witchweed, is associated with poor growth and dying of corn.

This plant has not been found in this part of the world before, but in South Africa, it has become a serious parasite on the roots of corn to the extent that its presence limits the crop there. According to USDA experts, this weed can wreak great damage on both corn and sugar crops in the U.S. If it gains a foothold. At present, there is no official information as to how the weed was introduced into this part of the world.

USDA officials, however, are alerted to the imminent danger of the situation and have set up field forces to combat it. From these government sources, it is indicated that this weed pest is of the same type as crabgrass in its effects. It thrives on sandy soil where one third of its life develops underground.

Inside You'll Find

Patents and Trademarks	3
World Report	8
What's New	10
Farm Service Data	13
Bug of the Week	14
Oscar and Pat	16
Editorials	22
Meeting Memos	23
Index of Advertisers	23

Railroads May Ask ICC for Greater Increase in Rates

WASHINGTON, D.C.—Mounting increases in major operating costs may force the railroads to ask the Interstate Commerce Commission for freight rate increases of 20 to 40% over going tariffs. At present the carriers have pending before the ICC a request to advance freight tariffs by only 15%.

Other new cost increases, such as the 12.5¢ an hour wage boost granted this year, plus an anticipated 5% increase in fuel, materials and payroll tax costs and higher steel prices now evident for 1957, will boost freight rate requirements, spokesmen say.

The pending 15% rate increase request is due for final hearing by ICC on Jan. 15, 1957. But by that time it is expected rate increases will be granted to cover the previous wage rate increases obtained by the railway unions. The additional cost factors, however, are likely to be presented to ICC when the final hearing on the 15% increase is held on Jan. 15.

Soil Bank May Spur Sale of Fertilizer, Midwest Group Told

By LAWRENCE A. LONG
Editor of Croplife

CHICAGO—The fertilizer industry stands to gain an estimated 350,000 tons in additional sales because of the soil bank, Dr. Earl L. Butz, assistant secretary of agriculture, said in an address before the 18th annual meeting of the Middle West Soil Improvement Committee at the Sherman Hotel here, Oct. 25.

Dr. Butz qualified his statement with a reminder that it must necessarily be of "highly speculative" nature, based largely on the supposition that many farmers will choose to intensify fertilizer application on the acres remaining to be cropped.

The MWSIC meeting attracted more than 250 persons representing the fertilizer industry throughout

the middle west. The group elected officers, a number of new directors, and heard reports from staff people on the year's activities. Reports were heard from G. H. Kingsbury, Kingsbury & Co., Indianapolis, Ind., MWSIC treasurer; W. M. Newman, Price Chemical Co., Louisville, Ky., retiring president; and C. R. Sparks, chairman of the audit committee.

Z. H. Beers, MWSIC executive secretary, reported on the results of the committee's 1955-56 educational program and discussed plans for 1957. Mr. Beers said the committee had maintained its "high batting average" on publicity, with items in 1,700 daily and weekly newspapers.

Radio coverage of MWSIC farm scripts was increased 25% during the year, with 357 corn belt stations now regularly carrying information on fertilizer value in boosting farm profits, he said. National, regional and state farm magazines reaching a circulation of 4,000,000 farm families published 21 MWSIC articles during the year. The fertilizer industry trade press also cooperated with the committee, covering meetings and giving generous editorial attention to various MWSIC activities, Mr. Beers said.

Visual education work was stepped up during the year, with the completion of two new film strips—"Growing Profitable Alfalfa" and "Band Seeding for Higher Profits." These have been distributed to schools for use by vocational agriculture classes and to county agents for farmer meetings. Work is being undertaken on additional film strips for 1957 release. Subjects may include: "Soil Sampling and Fertilizer Recom-

(Continued on page 21)

Lamar Does It Again—Harvests 257 Bu. Corn From One Acre

BOONEVILLE, MISS.—The harvesting of 257.1 bu. of corn from a single acre was completed recently by Lamar Ratliff, 17-year-old Prentiss County, Miss., 4-H club member who has been recognized since 1952 as the nation's champion corn grower.

This is 47 bu. less than the record yield of 304 bu. that he made in 1955. (See page 1 of the Oct. 10, 1955 issue of Croplife.) It is his second highest in seven years of championship corn demonstrations.

Factors contributing to his reduced yield this year included a large number of replants because of excess water last spring, and damage done by the rough headed corn stalk beetle.

His famous 1.6 acre corn patch has since 1950 produced more bushels of corn than any other area of the same size in Mississippi, and probably in the nation.

The yield from the annual one-acre demonstration alone averages

217 bu. for the years 1950 through 1956.

Among those present when the yield was being officially checked this year was Seth Pounds, vice president, Peoples Bank and Trust Co. of Booneville. This bank has sponsored county-wide 4-H club and adult corn contests since 1945.

"From an economic standpoint, the corn program has made greater progress than any other one thing in our agricultural program," Mr. Pounds declared. The county-wide corn yield has risen from an average of 18 bu. in 1945 to about 50 bu. At the same time, livestock numbers and income from livestock have increased 50%, the banker pointed out.

Dairying is second to cotton in the economy of Prentiss County, and hog production is expanding, said W. T. Smith, Booneville, county agent.

The youthful corn champion's success is due to following several practices that most corn growers can apply, according to Mr. Smith and James W. Archer, assistant county agent, who have helped him from the beginning with his 4-H corn work.

Lamar selects the kind of land best suited to corn, builds up the organic

Agronomy Meeting This Month Covers Broad Topic Range

CINCINNATI, OHIO—The 1956 meeting of the American Society of Agronomy is scheduled to be held at the Netherland-Hilton Hotel here Nov. 12-15. The sessions will be held in conjunction with the Soil Science Society of America; Crop Science Society of America; and the Agromic Education Division.

Presiding at the opening general meeting on Nov. 12, will be Dr. Iver J. Johnson, professor in charge of farm crops, Iowa State College, Ames, ASA president. Committee reports are scheduled to be presented at this session.

A broad range of topics are on the agenda for discussion during the week-long meeting. Sections on different subjects will run concurrently

(Continued on page 20)

Fertilizer Potential on Hay, Pasture Lands Emphasized At Southern Soil Conference

ATLANTA, GA.—Dr. L. B. Nelson, head of the eastern section, soil and water conservation research, of the Agricultural Research Service, U.S. Department of Agriculture, told the first annual southern soil fertility conference meeting here Nov. 2, that "pastures and hay lands constitute the most neglected segment of our agriculture."

The Southern Soil Fertility Conference, sponsored by the Southern Regional Soil Research Committee and the National Plant Food Institute, held its all-day meeting at the

Atlanta Biltmore Hotel, featuring speakers representing both groups, plus the U.S. Department of Agriculture, and the Land Grant Colleges.

Dr. Nelson, speaking on "Off-Season Fertilizer Potentials in the South," said that "the potentials for fertilizer for pastures and hay lands during the summer and fall months are particularly great."

He pointed out that "soils are in better condition in the fall of the year to accommodate application

(Continued on page 17)

(Continued on page 5)

Winter Oats and Barley Will Pay Southwest Growers

WASHINGTON—U.S. Department of Agriculture scientists find that oats and barley can be profitable crops in the Southwest—if the best varieties are sown at the right time and properly managed.

Tests by federal and state agronomists at the Oklahoma Agricultural Experiment Station, Stillwater, Okla., show that good cultural practices and judicious use of fertilizers can make these two crops more reliable. Some varieties of oats and barley also give growers a second chance to produce a high-yielding crop if the first planting in the fall fails.

Oats, as a high-protein feed for livestock, can be grown as grain or as forage for grazing, hay or silage. Winter oats are far more productive in the Southwest than spring oats, and they are also higher in protein content.

At the Stillwater station in a 5-year yield test, fall-sown Cimarron oats averaged 70.0 bu. per acre, whereas spring oats averaged only 41.9 bu. Generally, winter oats also have a higher percentage of groats (edible parts of kernels).

An 8-year test to determine the best seeding date showed that some winter oat varieties produce higher grain yields and test weights than do spring oats at any seeding time. Cimarron is one of these varieties. For highest production, this variety should be sown in the fall, but if extremely low winter temperatures cause the crop to fail, later sowing can still produce good yields. Cimarron is unique among winterhardy oats in its ability to perform well from spring seeding.

Winter varieties of barley respond much like winter oats. Rogers, a new variety of winter barley developed by the Oklahoma Agricultural Experiment Station in cooperation with USDA, proved to be the best strain for both fall and spring seeding.

This new variety is most productive when sown in the fall, but January or early February seeding produces a higher yield than any spring variety sown at any date. The Rogers variety was named after Oklahoma's Will Rogers and will be grown in 1956-57 by selected growers under contract with the Oklahoma Foundation Seed Stocks, Inc. Limited supplies of seed for general planting are expected to be available in the fall of 1957.

GREEN MANURE STUDY

DAVIS, CAL.—A 12-year study to find out how green manure crops affect soil structure and water infiltration is now under way at the University of California, Davis.



Elias Fischer

NINOL APPOINTMENT—Elias Fischer, formerly of Armour & Co., has joined the technical staff of Ninol Laboratories, Chicago, to head up development work in the field of agricultural emulsifiers. Ninol Laboratories, is currently expanding its Toximul line of emulsifiers for insecticide and herbicide formulations to cover the entire range of commercial pesticides.

United Heckathorn Has Widespread Projects

RICHMOND, CAL.—United Heckathorn of 600 South Fourth St., Richmond, is supplying chemicals for agricultural spraying in California and Florida and to the United Nations for use in four foreign countries, reports Harry R. Field, sales manager for the contract division.

United Heckathorn is working for the U.S. Department of Agriculture and the state of Florida in attacks upon the Mediterranean fruit fly. The fly is already under control in the Miami area but extensive spraying is still being done in the Sarasota region where the USDA is aiming at complete eradication.

This extensive operation covers over two million acres and United Heckathorn is employing C82, B17 and B18 airplanes in a gigantic aerial war against the fruit fly.

Mr. Field announced the company is supplying chemicals for the annual attack on the beet leafhopper in the Kettleman Hills, California area. Over 250,000 acres extending from Coalinga to Bakersfield are being sprayed to control the leafhopper which hatches and spreads from Russian Thistle weeds.

United Heckathorn has installed a portable plant at Lemoore airbase to supply the necessary chemicals for this two week operation.

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Mandatory Pink Bollworm Control Program Proposed

YSLETA, TEXAS—A mandatory pink bollworm control program for parts of New Mexico, West Texas and the Juarez Valley has been proposed by pest control experts. Representatives of the U.S. and Mexican Departments of Agriculture and agricultural departments of New Mexico, Texas and Arizona made the proposal recently at Ysleta, Texas, during a meeting with cotton growers and leaders of local farm organizations. Cotton producers in the pink bollworm infested areas will be asked to decide whether they want such a program.

At the Ysleta meeting, Dr. Sloan E. Jones of Brownsville, coordinator of pink bollworm research for the U.S. Department of Agriculture, termed pink bollworm infestation in this area (parts of New Mexico, West Texas and the Juarez Valley) as "the worst of any place in the entire Cotton Belt."

Some growers reported infestations as high as 100% in this year's cotton crop. Others at the meeting said that they had suffered losses as high as \$50 per bale from downgraded cotton fiber picked from infested fields.

Although only a few hundred acres showed infestation this year, John Durkin, extension entomologist at New Mexico A&M College, said the pest is spreading. Infestation has been particularly heavy in Dona Ana County during the past two years.

Monsanto Sales Show Increase In First Nine Months

ST. LOUIS—Sales of Monsanto Chemical Co. and its consolidated subsidiaries for the first nine months of 1956 were \$407,380,944. For the same period in 1955, sales were \$390,835,150.

The earnings on each common share from Jan. 1 through Sept. 30, 1956, amounted to \$1.37 based on 21,025,945 shares outstanding. During the same period in 1955 the earnings on each share of 20,998,945 shares outstanding Dec. 31, 1955, amounted to \$1.54.

In the third quarter of this year sales were \$127,124,171, an increase of \$2,492,728 above the same quarter in 1955. The quarter's income of 32¢ a share, however, was six cents a share less.

The company reported that despite higher labor rates there has been a general lowering of its selling prices and though the sales volume is greater, it has been of those products with lower profit margins. Research and development expenses in 1956 have been materially higher than in the prior year.

The board of directors declared the regular quarterly dividend of 25¢ a share and a stock dividend of 2% on the company's outstanding \$2 par value common stock. Both dividends will be payable Dec. 15 to holders of record Nov. 23.

Michigan Chemical Sales Hold Steady

ST. LOUIS, MICH.—Nine months earnings of Michigan Chemical Corporation were \$0.75 a share on the 537,077 shares outstanding against \$0.70 in the similar period in 1955.

Sales were \$5,271,648 against \$5,257,722 in 1955. With net income of \$400,965 for the nine months of 1956, the 1955 amount was \$271,852 net income and \$102,818 non-recurring profit realized from the sale of certain capital assets.

Depreciation and amortization of \$309,760 was taken for the 1956 period as compared to \$282,920 in the first nine months of 1955.



Ned P. Haldeman

Ned P. Haldeman New Spencer Chemical Sales Representative

KANSAS CITY—Ned P. Haldeman of Collinsville, Ill., has been named Spencer Chemical Co.'s new agricultural chemicals sales representative in Mississippi and Louisiana. He replaces Tom Campbell, who will become the company's representative in North Carolina. Announcement of the new assignment was made recently by Claude J. Byrd, sales manager for agricultural chemicals.

For the past five years, Mr. Haldeman has been associated with the Armour Fertilizer Works, East St. Louis, Ill., most recently as assistant division manager. He took over his new position beginning Nov. 1, and will make his home in the Jackson, Miss., area.

Mr. Haldeman is married and has two sons, James, 7, and Don, 2. During World War II he served with the Coast Guard. Following this, he attended the University of Missouri, graduating in 1951 with a B.S. degree in business administration.

Call for Papers Issued for 1958 Weed Society Meeting

WASHINGTON—The first call for papers for the 1958 meeting of the Weed Society of America has been issued by W. C. Shaw, Agricultural Research Service, U.S. Department of Agriculture, chairman of the program committee. The meeting will be held at the Peabody Hotel, Memphis, Jan. 13-15, 1958.

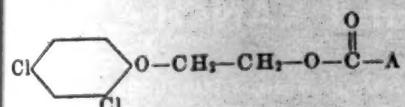
Sectional program chairmen are: Weed Control in Agronomic Crops, W. G. Westmoreland, North Carolina State College, Raleigh, N.C.; Weed Control in Horticultural Crops, G. F. Warren, Purdue University, Lafayette, Ind.; Weed Control in Non-Cultivated Areas, W. C. Bramble, Pennsylvania State University, State College, Pa.; Ecological, Physiological, and Edaphic Aspects of Weed Control, W. H. Minshall, Science Service Laboratory, University Sub Post Office, London, Ontario, Canada; Weed Control in Turf, R. E. Engel, New Jersey Agricultural Experiment Station, New Brunswick, N.J.; Public Health Aspects of Weed Control, A. H. Fletcher, State Department of Health, Trenton, N.J.; Regulatory Aspects of Weed Control, W. S. Ball, California Seed Laboratory, Sacramento 14, Cal.; Teaching and Extension Aspects of Weed Control, E. P. Sylvester, Iowa Agricultural Experiment Station, Ames, Iowa, and Control of Aquatic Weeds, E. W. Surber, U.S. Fish and Wildlife Service, Peachtree, 7th Bldg., Atlanta.

The titles of papers and three copies of an abstract of each paper are due in the hands of the sectional program chairman of or before next Aug. 1.

Industry Patents and Trademarks

2,765,218. Analysis of Sulfuric Acid. Patent issued Oct. 2, 1956, to Emanuel M. Amir, Baytown, Texas, assignor to Esso Research and Engineering Co., Elizabeth, N.J. A method for analyzing substantially hydrocarbon-free sulfuric acid having a strength in the range between 91% and 99% H_2SO_4 contaminated with carbonaceous material and opaque to light in the ultra-violet and higher regions of the visible spectrum but partially transparent to the yellow and red wave lengths which comprises dividing said contaminated acid into a first and second stream, adding 0.1 ml. of an approximately 0.01 molar solution of alizarin blue in sulfuric acid having a strength in the range between 91% and 99% H_2SO_4 to 25 ml. of said second stream, and then separately exposing said first stream and said second stream containing said alizarin blue in a spectrophotometer to light having a wave length in the range from about 5000 to 7000 Å to obtain an electrical signal which is a measure of the optical density of the contaminated acid in the second stream containing alizarin blue, whereby the acidity function of said contaminated acid is determined.

2,765,224. Herbicide. Patent issued Oct. 2, 1956, to Joseph A. Lambrecht, Charleston, W. Va., assignor to Union Carbide & Carbon Corp., New York. A herbicidal composition containing an ester of the formula:



in which



Contains from 1 to 18 carbon atoms and is the residue of a member of the group consisting of carboxylic acids and chlorinated carboxylic acids, A is a terminal group which is a member of the group consisting of hydrogen, alkyl, alkenyl, chlorinated alkyl, aryl, chlorinated aryl, carboxyalkyl, carboxychloroalkyl, carboxyalkenyl, carboxychloroalkenyl, neutralized carboxyalkyl, neutralized carboxychloroalkyl, neutralized carboxyalkenyl and neutralized carboxychloroalkenyl and a carrier, the ester being present in sufficient amount to render the composition toxic to weed seeds.

2,765,255. Insecticidal Emulsion Concentrates. Patent issued Oct. 2, 1956, to Thomas Swarbrick, Dundee, Scotland, assignor to Shell Development Co., Emeryville, Calif. A stable, flowable, water-dispersible insecticidal concentrate composition having a consistency of at least about 100 deci-millimeters and comprising a solid insecticide finely divided into particles of less than 100 microns in size, said particles being suspended within an intimately admixed liquid dispersion of water and an essentially water-insoluble organic liquid, the water in said concentrate comprising less than about 25% by weight of the concentrate, the organic liquid in said liquid dispersion being the continuous phase, said insecticide being substantially insoluble in water and in said organic liquid, said concentrate also containing an emulsifier adapted to stabilize the concentrate and to promote dispersion of said concentrate in water to form an emulsion in which the aqueous phase containing separately dispersed solid particles is the continuous phase.

2,765,272. Preparation of Benzene Hexachloride. Patent issued Oct. 2, 1956, to Joseph A. Neubauer, Pittsburgh, Pa., and Franklin Strain, Barberton, and Frederick E. Kung and William E. Bissinger, Akron, Ohio, assignors to Columbia-Southern

Chemical Corp., Allegheny County, Pa. A method of preparing benzene hexachloride which comprises introducing elemental chlorine into a liquid reaction mixture comprising benzene, maintaining the chlorine concentration in the mixture throughout substantially the entire reaction period in the range of 0.001 to 2 per cent by weight of the mixture, maintaining the temperature of the mixture below 5° C., irradiating the mixture with actinic light and minimizing fluctuations in the chlorine concentration within said range in the reaction mixture during the chlorine introduction by maintaining in the mixture a small catalytic concentration of an organic peroxide catalytically operative at the reaction temperature.

2,765,290. Soil Conditioning. Patent issued Oct. 2, 1956, to George E. Ziegler, Evanston, Ill., assignor to Zonolite Co., Chicago, Ill. A method of conditioning soil that comprises intimately admixing therewith 0.05 to 5 weight percent thereof of exfoliated vermiculite particles, 0.02 to 0.2 weight percent thereof of sodium polyacrylate whose 12½ weight percent aqueous solution has a Brookfield viscosity of 5,000 to 50,000 centipoises and water in an amount that is at least equivalent to 15-20 weight percent of the sodium polyacrylate.

2,765,321. Process of Making Crystalline Warfarin Sodium. Patent issued Oct. 2, 1956, to Collin H. Schroeder, Madison, and Karl Paul Link, Middleton, Wis., assignors to Wisconsin Alumni Research Foundation, Madison, Wis. In the process of preparing crystalline, stable, free-flowing warfarin sodium from aqueous solutions of warfarin sodium prepared by reacting a aqueous sodium hydroxide with excess warfarin and the removal of the excess warfarin, the improvement which comprises adding about 25 percent by volume of ethanol to the warfarin sodium solution, adding lithium chloride to the aqueousethanol solution, stirring the resulting solution while cooling below room temperature, and recovering the resulting warfarin sodium crystals from the mixture.

Industry Trade Marks

The following trade marks were published in the Official Gazette of the U.S. Patent Office in compliance with section 12 (a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within 30 days of publication in the Gazette. (See Rules 20.1 to 20.5.) As provided by Section 31 of the act, a fee of \$25 must accompany each notice of opposition.

The following trademarks were published in the Official Patent Office Gazette dated Oct. 2, 1956:

Pentachlor, in capital letters, for chlorinated phenols and their sodium salts for use as fungicides, herbicides, algae control in pulping mills and for termite-proofing lumber. Filed Aug. 16, 1955. First use June 27, 1955.

Elco, in script, for insecticides and rodenticides. Filed Sept. 22, 1955, by Harry Katz, doing business as Elco Mfg. Co., Pittsburgh, Pa. First use December, 1928.

Gelgy, in hand-lettered style, with extensions of letters "G" and "Y" forming an oval around top and bottom of word. For chemical specialties, including fungicides, insecticides and rodenticides, plus a number of industrial chemicals. First use May 13, 1942.

The following trademarks were published in the Official Patent Office Gazette dated Oct. 9, 1956:

Borerkil, in capital letters for preparation for killing borers. Filed Nov. 21, 1955, by Lethelin Products Co., Inc., Mt. Vernon, N.Y. First use March, 1935.

Delta, in capital letters, for insecticide. Filed Feb. 21, 1956, by Ernest E. Reich, doing business as Delta

(Continued on page 18)



NEW GRANULE Hi-D (HIGH DENSITY) CSC AMMONIUM NITRATE SPREADS EVENLY

These low-moisture granules always flow freely, spread evenly, and stay put after spreading. When you use nitrogen to maintain top yield per acre, CSC Ammonium Nitrate is an excellent source. A minimum of 33.5% nitrogen is guaranteed — half is nitrate nitrogen for rapid early growth, and half is ammonia nitrogen for steady, continued growth.

actual size

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farm mechanization, household improvements, and category after category.

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- Subscription sales are booming. We produced 445,736 paid subscriptions in the South in 1955. More than any publication ever did before.
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McDonald-Thompson

257 BUSHELS

(Continued from page 1)

matter, uses plenty of commercial fertilizer and places some of it deep, plants an adapted hybrid, controls weeds and has irrigation for use if needed.

He started on his 1956 demonstration as soon as he had harvested last year's crop. First he disked his stalks into the soil. Then he started broadcasting barnyard manure. He has applied 10 to 12 tons of manure per acre on this land during each of the past several years.

With his mule-drawn middle buster, he broke the land 10 times during the past winter. This is sandy loam branch bottom that has grown corn every year but one since 1926.

About three weeks before planting time, Lamar placed commercial fertilizer 16 to 18 inches deep beneath the furrow and then bedded back over it. This deep-placed fertilizer was 1,000 lb. of 14-14-14 and 500 lb. of ammonium nitrate per acre.

At planting, he applied another 300 pounds of 14-14-14 and 200 lb. of ammonium nitrate per acre in the seedbed. When the corn was knee high, he side dressed it with 300 lb. per acre of ammonium nitrate.

He made his first planting for 1956 on March 23, but had to replant on April 24 due to excess moisture. He planted mostly Funks G 711, filling in some skips with faster maturing G 50.

The corn was on 31 inch rows, spaced 8 inches between stalks in the drill. This figures about 18,000 stalks per acre. Replants cut down on the stalk population this year. Lamar cultivated his corn twice, going just deep enough to destroy most weeds.

His most effective weed control was by chemical means, which he tried this year for the first time.

For weed control, he sprayed 2,4-D from a three-gallon hand sprayer when the corn was tasseling. He was careful not to get the chemical on the upper parts of the corn plants. Due to the chemical weed control, he had only a few cockleburrs at harvest time, compared to heavy growth of morning glory and other vines at previous harvests.

Lamar's corn received fairly good showers during the season, as did most corn in Prentiss County. Still, he irrigated twice by gravity from a nearby farm pond. He ran water down the furrows until it flowed freely into a ditch at the other side of the field. This was in late June and early July.

At the harvest, Mr. Smith recorded the weight of every bushel of this corn, as he did in previous years. He sent a sample of shelled corn to Mississippi State College where the moisture content of 16.99% was determined. A light rain on the corn before it was picked up probably caused the moisture to be up some. Finally, he calculated the yield figure.

Lamar's father, Paul Ratliff, has actively encouraged him in corn production and 4-H club work in general. Their farm is 170 acres, but the majority of this is not in cultivation. Mr. Ratliff owns and operates a grocery store on the road going past his place, a few miles east of Baldwyn.

Chase to Expand Portland Plant

PORTLAND — Expansion of the Chase Bag Co. branch in Portland has been announced by J. A. Brewster, manager.

A new building covering approximately 25,000 square feet is under construction on property adjoining the present plant at 2550 N. W. Nicolai St., built in 1939. The new building will be devoted mainly to warehouse space, enabling Chase to increase its capacity to store large quantities of bags for immediate shipment.

Olin Mathieson Sales Show Gain

NEW YORK—Sales of Olin Mathieson Chemical Corp. in the third quarter of 1956 totaled \$155,491,766, compared with \$138,340,735 in the same period last year, Thomas S. Nichols, president, announced Oct. 31. This is a gain of 12%.

Net income totaled \$14,299,715 and was equal to \$1.08 a share on common stock outstanding, compared with a net of \$12,514,568, equal to \$1 a share, in the like 1955 period.

Reported results for both 1956 and 1955 include non-operating income approximating 10% of the cumulative net profit. The 1956 nonoperating income includes profits from the sale of timberlands (announced earlier this year) and of certain assets not directly related to the corporation's principal operations, less applicable losses.

In addition, a reserve provision has been established for losses which may

result from the liquidation of comparable assets before the year-end, Mr. Nichols added.

For nine months ending Sept. 30, 1956, the corporation's sales in the U.S. and Canada totaled \$455,542,174, compared with \$409,141,699 in the like 1955 period, an increase of 11.3%.

Total net income in this period amounted to \$35,903,232 or \$2.71 a share, compared with \$32,456,307 or \$2.60 per share. The \$2.60 earning in the first nine months of last year reflected a smaller average number of common shares outstanding in the 1955 period.

Alabama Conferences

AUBURN, ALA.—The annual Alabama Pest Control Conference and the first annual meeting of the Alabama Association for the Control of Economic Pests will be held here Feb. 19-20, according to W. G. Eden, Alabama Polytechnic Institute, secretary-treasurer of the association.

CROPLIFE, November 5, 1956—5

Farmers Using More Irrigation Water Than Needed, Tests Indicate

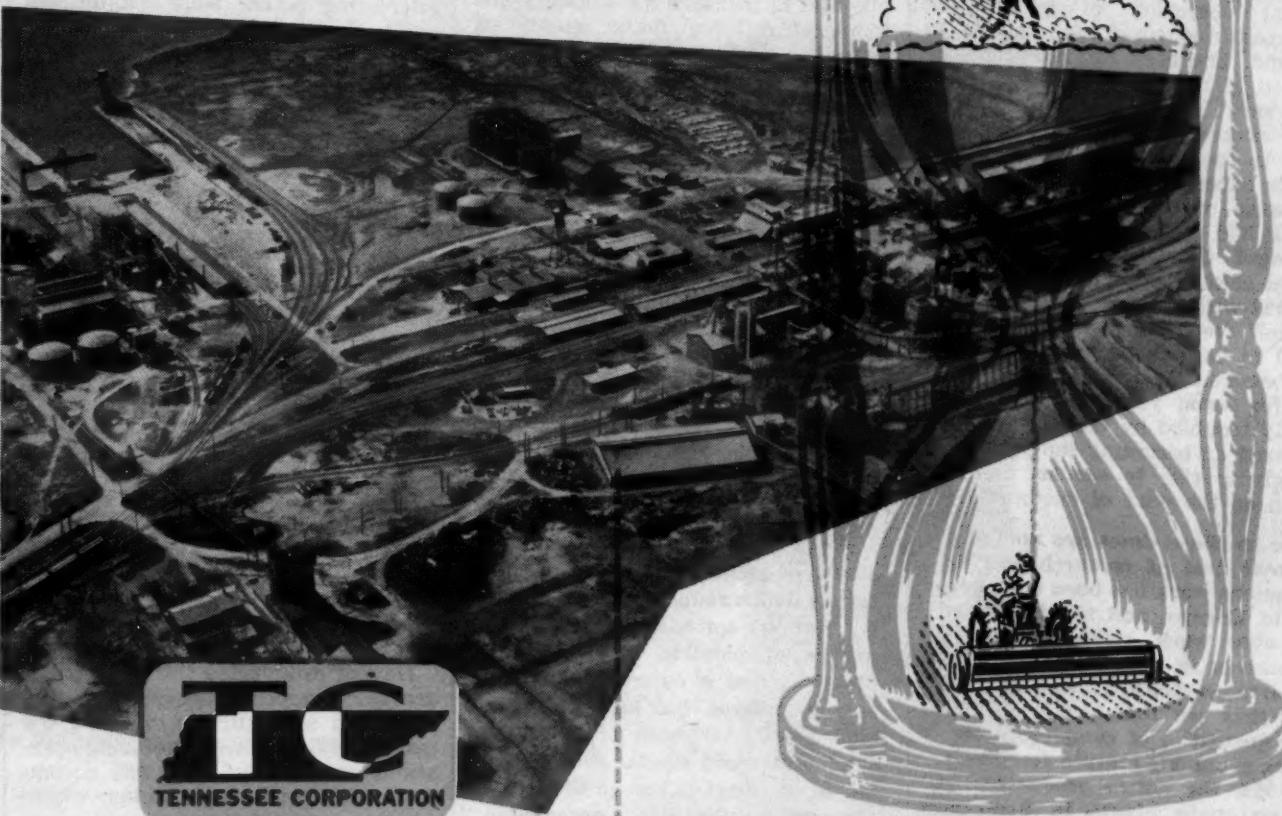
LUBBOCK, TEXAS—Farmers who are apprehensively watching the Texas water table drop lower and lower, might prolong the use of their irrigation wells by using less water, according to experiments at the Lubbock Field Station.

Many farmers use more water than needed. Several test fields in this and other counties by the station showed that good cotton crops could be made by using much less water than farmers normally apply.

Usually only about two waterings per summer are needed, whereas many farmers irrigate from three to five times. On one field the station crop yielded 312 lb. lint by irrigating only one time, and this was before the cotton was planted.

The station recommends that where cotton is planted late, only a pre-planting application is necessary.

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Scottish Expert Describes Methods to Control Caking In Granular Fertilizers

By E. P. HUDSON*

Assistant Managing Director
Scottish Agricultural Industries Limited, Aberdeen, Scotland

I have been invited to tell you of useful and effective development work done in recent years by my company, Scottish Agricultural Industries, Limited, which are the second largest producers of superphosphates and of mixed fertilizers based on superphosphates, in the United Kingdom. Records of our company's activities go back at least to 1774, and we have been in the superphosphate business since its early beginnings.

In the fall of 1947, I had the pleasure of presenting a paper in Sweden before the International Superphosphate Manufacturers' Assn. on mixed fertilizer granulation. This paper described my company's experience in introduction and full scale commercial operation of granulation processes in our six main plants in Scotland. The need for research was stressed in this paper, since at that time, very little fundamental study of the processes had been done anywhere in the world, with one or two notable exceptions.

Because of this lack of information, I had to express some disappointment that in facilitating the natural caking, or set, of the mixed material within the individual granule itself, we had not altogether succeeded in eliminating caking or setting between adjacent granules. In fact, for some years we were continually troubled by the product setting hard or becoming lumpy in the bag, giving rise to serious dissatisfaction on the part of customers.

For us those times are now past. A great deal of research and development work has been done here and in Europe, and the results of our own work started to show themselves in very tangible ways as early as 1952. It was in that year that we first produced tonnage quantities of completely non-caking granulated mixed fertilizers. By 1954, the entire production of our six main plants in Scotland was in this form, and for the past two years we have been able to advertise the claim that our granular compound fertilizers would not—under reasonable storage conditions—cake at all, even after prolonged storage.

During that time we have delivered some half-million tons of product; we have had no complaints of our product being other than completely free flowing and our claims have been proved to the hilt. Our work has now been written up, and published in the form of a paper presented by Dr. Bernard Raistrick, Research Manager of S.A.I., at a meeting of the Fertilizer Society in London in March, 1956. I can only refer briefly to the salient features of the work, as time does not permit of even a condensed version of the full paper.

Our research program was initiated along three lines simultaneously:

- (1) Laboratory studies of caked fertilizers and of the mechanism of caking.
- (2) Detailed study of the manufacturing processes, and assembly of all the facts of operation (temperatures, rates, analyses, etc.)
- (3) Experimental survey of additives.

The principal preliminary results,

one from each of these three lines of study, were:

(1) We proved conclusively that the principal bridging compound was dendritic ammonium chloride. This accumulates on the surface of the granule, almost surely by diffusion in saturated solution during the drying stage. The bridges between adjacent granules are formed during storage, presumably by recrystallization from traces of solution phase.

We were then led to study the humidity conditions inside a bulk pile of 800 tons of 7½, 9, 12, average moisture content by conventional test 3-4%. The pile was formed around a metal tube which had one open end in the center of the pile and the other protruding from the surface. The tube was used to withdraw air from the pile and to measure its humidity and temperature. We found plenty of water; it condensed in large quantities in apparatus external to the pile when air was drawn from the pile.

(2) Under this heading, methodical observation of manufacturing operations showed short-term fluctuations of much greater magnitude than previously realized, despite the fact that the process is a continuous one, operated round the clock. Temperatures and moisture contents varied over a wide range, at shift changes and at other times. It was clear that uniformity and controllability of product quality—a prerequisite for effective experimental work on the full plant scale—could be attained only if operating conditions were much more firmly stabilized.

(3) The comprehensive tests on additives yielded a number of materials which reduced caking slightly. But in spite of trying many dozens of possible materials, we failed to find a cure for caking—only palliatives. Our later work included materials such as alkyl aryl sulphonates and similar substances, and also materials known to modify the crystal habit of ammonium chloride, but without satisfactory results.

We also studied the effect of ammoniation on caking behavior, but without finding any significant difference between ammoniated and non-ammoniated products.

By this time we had concluded that the key factor was moisture content, and the research was continued along two main lines—

a. The study of the water vapor pressure (expressed as relative humidity) of the granular fertilizer and of any correlations with caking propensity, and

b. The improvement of the plant operations so as to secure greater stability of operating conditions and then to seek for correlations between caking propensity and product moisture content.

What we called our moisture activity studies were carried out by a gravimetric flow method, to determine the relationship between the relative humidity and the moisture content of two different fertilizers.

One fertilizer composition contained no superphosphate; the other was a superphosphate-based mixed fertilizer, analysis 8, 9½, 13. These parallel studies on the caking propensities of granulated mixed fertilizers, of various compositions and of various moisture contents, led us slowly to the conclusion that the way to prevent caking was to dry to much lower moisture contents than was normally

practiced at that time—to something like 1% or less, instead of to 3 or 4%.

The final conclusion of the research work was that the key figure was the so-called relative humidity of the fertilizer, rather than the moisture content; and that caking would not occur if the fertilizer were dried down to a figure of not greater than 30% relative humidity as determined by our gravimetric flow test.

The significance of the relative humidity/moisture curves can now be appreciated. Depending on the composition of the mixed fertilizer, there can be a wide range in the value of the figure of moisture content which corresponds to the 30% relative humidity figure. The critical moisture content is about 1% when the superphosphate content of the mixed fertilizer is in the range of 30-50%, and it is higher or lower when the superphosphate content is respectively above or below this range.

It might be added that though the conclusion is thus simple, a long period of hard work and experimentation was required to establish and to prove it. In the course of this work several interesting points were established, which can be only listed here without discussing in detail. These points are:

(a) The presence or absence of fines in the product has no significant influence on caking of the type met with in granulated mixed fertilizers.

(b) The inherent caking propensity of a granulated mixed fertilizer is independent of the temperature at which the fertilizer is packed or put into the store. (There are often excellent reasons for having a cooling stage, but prevention of caking is not one of them—except insofar as cooling carried the drying process further—which is not ordinarily the case in the humid British climate.)

(c) For a perfectly free-flowing product, the package must not be liable to puncture or crack. We use multi-ply paper bags with a bitumen inner layer. Cracks in the interlayer, or punctures caused by granules getting between the plies during packing, lead to the growth of lumps.

Having established the critical figure below which there would be no caking in after-storage, we had the task of adjusting manufacturing operations accordingly. This was accomplished first at a single factory where we ran successfully under the new conditions for the whole of the fertilizer year 1953-54. By the beginning of the fertilizer year 1954-1955, the new conditions had been worked out, tested and brought into routine application at our other five plants also. In these developments there were two essential things which were achieved:

First: For technical success it was necessary that all the product, all the time, should be held down to the desired moisture content (in most cases about 1%). All causes of fluctuations in plant operating conditions were tracked down and eliminated—so far as could be achieved by the wit of man and by a process of complete retraining of all the plant operatives. We were able to establish the necessary correlations and to introduce a system of process control tied to the

product temperature at the drier exit.

Table 1 gives a typical example of the range of moisture contents under the new system of working at all our six plants during a single calendar month. Note the small range of fluctuation.

Second: For economic and other reasons, we had to produce a much drier fertilizer without loss of output and without installing larger-capacity driers, without significant P_2O_5 reversion or ammonia loss, and preferably without increase in operating costs. On our first experiments we had to accept a cut-back in output of 25-30% in order to get the moisture down from 3 or 4% to 1%. The solution had to be found by reducing the amount of water coming forward to the drier, and we finished up with 1.20% outputs and lower fuel usage per ton of product.

The two ways the water feed to the drier can be reduced are:

(a) By reducing the amount of water required for the granulation of a given quantity of incoming raw material.

(b) By increasing the proportion of the material fed to the granulating system which is converted to granules of the required product size-range at each pass.

In principle, these means are available for any cyclic granulation process in which liquid in some form or other is added and in which fines and oversize materials are screened out and sent back for reprocessing, whether it be the process we operate or, say, a continuous ammoniator-granulator.

The most powerful effect comes from a reduction in the amount of fines which has to be recycled, re-wetted and re-dried, the more so since such fines are usually more difficult, and require more water, to granulate. But a reduction in recycled oversize also contributes, as this must go back to the drier to be brought down to the required low moisture content.

Incidentally, the reduction of recycle, besides having a startling effect on the drier load, eases the load on the screens and makes it easier to turn out a product of narrow and clean-cut size range.

Table 2 shows the average screen analyses at all six plants for a single month's working.

To conclude, the story I have tried to tell is neither wholly new nor wholly complete. Many methods have been proposed and practiced for producing free-flowing superphosphate-based mixed fertilizers—including drying to various low moisture contents. We have merely put a firm figure of 30% relative humidity to the drying specification for our own materials and circumstances, and we have shown on many hundreds of thousands of tons that it produced the desired result all of the time. After this specification had been chosen, the rest was sheer hard work on process development and process control.

The granulation plant must be operated continuously in balance, with a minimum of stoppages, both

(Continued on page 19)

TABLE 1—Moisture contents of NPK fertilizers—month of September, 1955.

	Plant 1	Plant 2	Plant 3	Plant 4	Plant 5	Plant 6
Minimum moisture content (%)	0.3	0.2	0.3	0.4	0.7	0.4
Maximum moisture content (%)	0.5	0.5	0.9	1.2	1.1	1.6
Weighted average content (%)	0.4	0.4	0.6	0.6	0.9	0.9

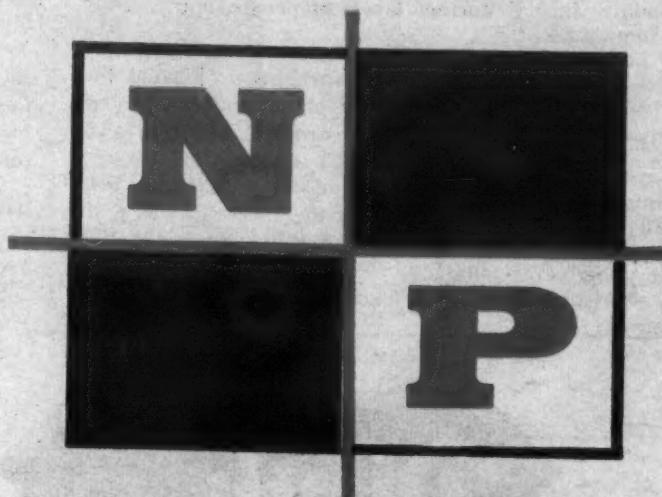
TABLE 2—Screen analyses of NPK fertilizers as manufactured. Averages for month of September, 1955.

Sieve Grading	Plant 1	Plant 2	Plant 3	Plant 4	Plant 5	Plant 6
On 5	1%	6%	4%	2%	5%	8%
5-7	16	20	57	36	29	37
7-12	53	53	38	45	51	48
12-16	21	16	1	15	13	5
16-30	9	5	..	2	2	2
Through 30

Factories 1, 2, 3 and 5 are pan type plants; 4 and 6 are tube type plants.

*From paper delivered before the Fertilizer Industry Round Table, Shoreham Hotel, Washington, D.C., Oct. 16, 1956.

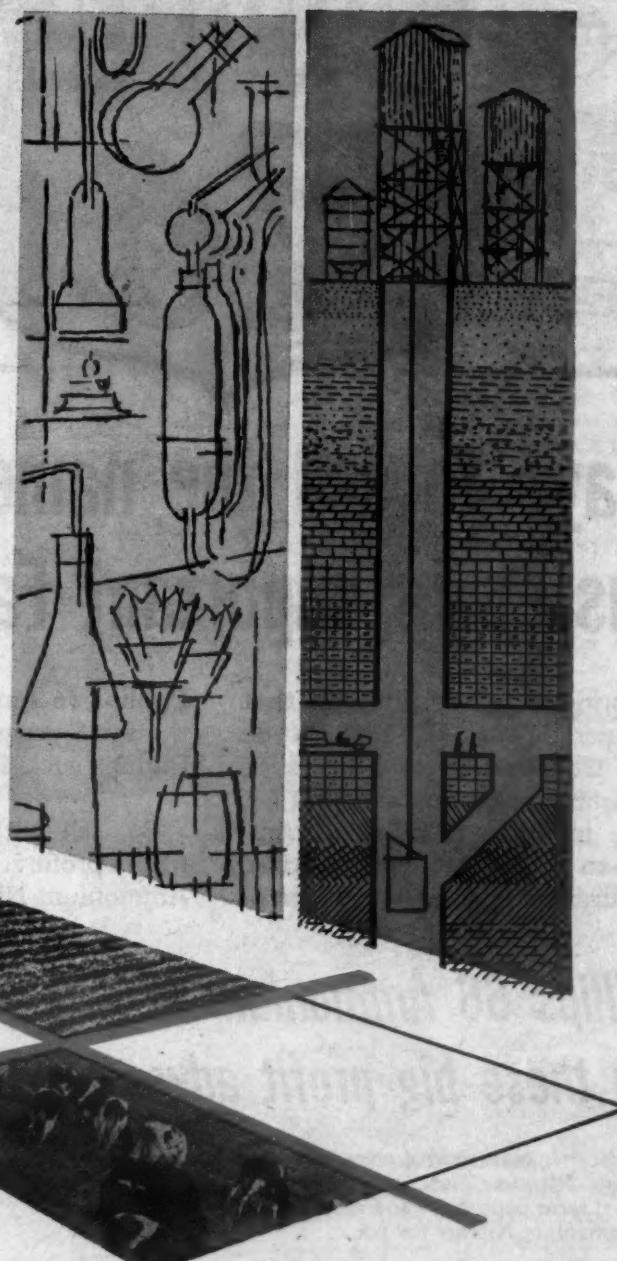
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WORLD REPORT

By GEORGE E. SWARBECK
CropLife Canadian and Overseas Editor

If the so called "minor" war in the Middle East flares up into a full scale operation, the Israeli economy, into which so much work and money has been poured, will be hit hard. Admittedly, there are few targets worth bombing because the country has not yet reached peak industrialization.

Almost certain to be attacked are the plants of the rapidly growing fertilizer industry. The Egyptians, in the last set-to between the two countries, made a big point of putting the Dead Sea potash instal-

lations out of action and plants have not yet been restored to their former levels of production.

At Haifa, reported as bombarded by Egyptian warships, is located the new ammonia plant of Fertilizer & Chemicals Co. and invested in this project is \$2.5 million of foreign money. Much of the equipment was imported from the U.S. and was paid for by means of a loan from the Export-Import Bank in Washington. Output of ammonia is rated at 15,000

tons a year with an offtake of 45,000 tons of ammonium sulfate.

The Israeli government holds 50% of the share capital in the company.

The Dead Sea works have not yet reached optimum production but the progress so far is indicative of things to come. The Kuhlmann superphosphate plant, in operation since 1951, is producing 120,000 metric tons a year and much of its production is going into export channels.

The Israeli government, presumably, feels strongly enough about the Arab situation to risk putting its rapidly expanding fertilizer business in jeopardy, for the Egyptians, if they have the aircraft, will assuredly attempt to wreck these installations.

Burmese Plant

A group of Burmese businessmen is endeavoring to raise \$630,000 in the U.S. to cover the cost of machinery

and technical assistance for a new chemical plant.

Primary aim is to manufacture caustic soda but the firm also hopes to enter the insecticide field since the prospects of business are rated as good. A careful marketing survey has been made, the sponsors claim.

Leader of the project is L. Htin Si, general manager of the Rangoon Electric Tramway and Supply Co., Ltd.

Wild Oat Control

Wild oats are the scourge of the Canadian prairie farmer. From time to time reports have appeared which suggest that a chemical solution to the problem as far as cereals are concerned is just around the corner.

Although some of the results are encouraging, government agricultural officials do not feel that they are yet in a position to make a definite recommendation, states H. A. Friesen, a staff member at the Lacombe Experimental Farm of Canada's Department of Agriculture.

Several chemicals have been under test at Lacombe but results with wheat, oats and barley have not been satisfactory, even with rates of application as high as 10 lb. to the acre. Although the wild oat kill was up to 90% in the 1954-55 season and about 60% in 1955-56, there has been a slight reduction in crop stand due to the carryover effect of the chemicals.

The cost of the material is also said to be too high to make the project commercially economic.

However, Mr. Friesen says that there are many more chemicals worthy of testing and the station proposes to continue its work.

Indian Find

A 10-mile belt of gypsum deposits has been discovered in Uttar Pradesh, India. Pure limestone suitable for the chemical industry has been found in the Bandra district. Lignite has been found near Mussoorie.

These, additional to earlier finds of valuable raw materials, have spurred the chemical industry to greater efforts and the government is giving financial support. Leading the field in development right now is the fertilizer industry and the government is determined to increase agricultural production by making the best use of available production facilities. More plants are being planned and the hope is to become independent of imports.

New Dutch Plant

A new sulfuric acid plant has gone into production at Vlaardingen, Holland. Owner is the Windmill Fertilizer Works.

The company supplies one third of the superphosphate used in the Netherlands and shares in the export business taken by Dutch firms. Compound fertilizers are also manufactured at the plant, both powdered and granular. The firm produces its own ammonium phosphate.

In the new sulfuric acid plant crude sulfur is burned and the sulfur gases are transformed into acid by the contact process. This facility is additional to the existing sulfuric acid plant, established 3 years ago, where pyrites are roasted and acid manufactured in lead chambers.

The new plant is reported to be operated on the Monsanto system and was built by Simon Carves, Ltd. of England. Annual production capacity is rated at 50,000 tons. A special feature is the provision of facilities for converting the plant to burn pyrites instead of crude sulfur, if and when required.

CROP DAYS

LINCOLN — Crop Improvement Days are scheduled for Jan. 28, 1957, at the University of Nebraska College of Agriculture, C. R. Potts, secretary-manager of the Nebraska Crop Improvement Assn., has announced.



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County Agent, Washington County, Tenn.

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Americans have always found a way . . . we must put our imagination and hands to work . . . we must consider our responsibility to ourselves, our families, our neighbors, our youth, our country and our Maker.

We must not be afraid of what's ahead. Sitting pretty? Just who is sitting pretty? It would be difficult to name a person or a people to whom or which "sitting pretty" would be applicable. We never liked the expression anyway; sounds like something finished."

Time is lent to us . . . and duty performed is a moral tonic . . . every day is a gift, and today is, "our day." Tomorrow belongs to no one. We spend our lives in anticipations that some day we'll be happy . . . consider today. Our day is now.

We live in the best country in the world, the best state in the nation; the best community in the state; we go to the best church; we have by far the best neighbors; we have the sweetest family; we have the best job and today is the best day of our lives.

Who wants business as usual? Remember the wheel of Providence is always in motion, and the spoke that is on top today, will be under tomorrow . . . today is not yesterday, and success or failure in business is caused more by the mental attitude, even than by mental capacities.

Whatever you do . . . help your farmers to prosper. The whole country prospers when farmers prosper.

VIRGINIA SOIL SAMPLES

BLACKSBURG, VA.—The number of soil samples tested in the agronomy department of Virginia Polytechnic Institute has steadily increased the past 11 years, according to W. W. Lewis, VPI agronomist. The number jumped from 2,431 samples tested in 1945 to 20,227 in 1950 and 49,340 in 1955.

FRESH PEACH SHIPMENTS

COLUMBIA, S.C.—Market reports show that South Carolina has retained its position as the nation's leading fresh peach shipper. Nearly 6,000 carlot equivalents were inspected and certified during the current year. J. E. Youngblood, chief of the Division of Marketing, State Department of Agriculture, reports a trend toward a wider marketing season; inspection requests came in from June 3 to Aug. 22, latest date on record.



MISSISSIPPI DEALERS—Clyde Kynerd, left, and his son, Guy, owners of Kynerd Implement Store, Meridian, Miss., are shown above in the left photo as they talk over a fertilizer sales problem. At right, employees are seen



unloading fertilizer from one of the firm's truck and trailer hauling outfits. The Kynerds use their own trucks to pick up fertilizer at the source of supply. Often, all or part of a 17-ton load is delivered on the return trip.

MERIDIAN, MISS., AREA

Dealer Cuts Fertilizer Distribution Costs

By AL P. NELSON

Croplife Special Writer

Any firm selling to farmers has an opportunity to serve them better by a study of the sources of supply and distribution charges, and to try to effect savings which will result in a better margin of profit for the dealer.

When Clyde Kynerd and his son, Guy, owners of the Kynerd Implement Store, Meridian, Miss., found themselves in a highly competitive situation on fertilizer — involving some heavy discounting year after

year—they decided they would have to effect some savings along the line or else stop selling fertilizer in their particular area.

After studying the problem, they discovered that many implement and other sales came through fertilizer connections, and they hated to give up selling the item. Thus, they came up with the following solution to the problem:

1. They purchased trucks and trail-

ers to haul their fertilizer from New Orleans and the Mississippi Coast, the supply points. In this way they received the haulage charges for the fertilizer themselves, instead of paying someone else for this task.

To handle the project properly, the Kynerds bought not only one truck and trailer, but three. Each truck and trailer cost about \$7,500 with the trailer portion amounting to about \$3,600.

Only one truck and trailer is used for hauling of fertilizer. The other two trucks are leased to a lumber company and to a manufacturing company at a rate which pays for the trucks and also returns a profit. There is also a spare, fourth trailer in the deal which was arranged through a local bank.

The Kynerds say that it costs them about \$850 per month for operation and maintenance on each truck. Their farm equipment shop takes care of the service on all three trucks and four trailers.

At certain times of the year, especially in spring and fall, the Kynerds try to sell fertilizer along a certain rural route, for example. Then when the truck is loaded at New Orleans (night) and gets to Meridian early next morning, that full load of fertilizer can then be delivered and unloaded right on the farms.

Each trailer load of fertilizer has a maximum of 17 tons. If this had to be unloaded at the Kynerd warehouse, stored and then reloaded for farmers, there would be a high labor charge. The Kynerds try to sell as many complete loads of fertilizer (34,000 lb.) as they can along nearby farm routes. Thus they make money hauling their own fertilizer from the supply plant and save loading and unloading charges at point of sale.

Using this type of setup, the Kynerds make a reasonable profit from their fertilizer operations despite a very competitive market.

Also, using a trip lease permit, the Kynerds can use their truck and trailer within the state for limited hauling. Thus a pay load can be taken deep into Mississippi, unloaded; then the truck and trailer can continue to New Orleans, load up with fertilizer that night, and be back in

SHOP TALK

OVER THE COUNTER

FOR THE DEALER



By EMMET J. HOFFMAN

Croplife Merchandising Editor

In your lifetime you no doubt have been nicked for loans by friends and—in some cases—you probably weren't paid back. If you had a sign on your coat lapel saying "Absolutely no loans to friends or anybody else," you would have given fair warning to everyone of your feeling and scared off perhaps 99% of those who wanted to "put the bite" on you. Likewise, you would be money ahead.

No matter how practical, a person doesn't dare to walk around with such a sign on his lapel. And it certainly wouldn't be tactful either for the dealer to express his views on credit in that manner. However, the alert dealer can have such a sign on his "business lapel" and retain the good-will of his customers. In addition, he can save himself a lot of grief and also money.

The "business lapel," of course, is a credit policy sign somewhere in the store, prominently displayed so that everyone knows what your method is for handling credit.

One dealer's credit sign reads like this:

"All sales cash.
For credit see the management.
No credit allowed beyond 30 days."

While such statements seem contradictory, they do indicate that the dealer prefers all sales to be for cash. But it leaves the door open for those who cannot pay cash. These persons are not rebuffed and told that their business isn't wanted.

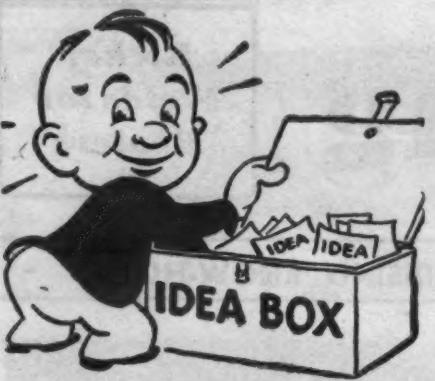
The mere fact that this credit notice follows the cash announce-

ment copy seems to indicate that while cash is the usual basis of doing business here, those with special credit requirements may be able to get credit. But the copy infers, "Don't talk to the employees about credit. See the boss."

The copy still hasn't refused to give a farmer credit, but the tone of the copy certainly wards off the deadbeat, the no-pay customer who may think he can slip one over on the dealer. Such a guy may well get cold feet when he reads this credit policy sign and decide to go elsewhere. However, the honest farmer who really needs credit will not be afraid to approach the dealer and ask for credit. And this is what the

(Continued on page 11)

(Continued on page 11)



What's New...

In Products, Services, Literature

You will find it simple to obtain additional information about the new products, new services and new literature described in this department. Here's all you have to do: (1) Clip out the entire coupon and return address card in the lower outside corner of this page. (2) Circle the number of the item on which you desire more information. Fill in your name, your company's name and your address. (3) Fold the clip-out over double, with the return address portion on the outside. (4) Fasten the two edges together with a staple, cellophane tape or glue, whichever is handiest. (5) Drop in any mail box. That's all you do. We'll pay the postage. You can, of course, use your own envelope or paste the coupon on the back of a government postcard if you prefer.

No. 6495—Copper Oxide Booklet

The Calumet Division, Calumet & Hecla, Inc., announces a new booklet on "Calumet Brown Copper Oxide—Fertilizer Grade." The booklet on the concentrated source of copper for fertilizer mixtures and direct soil applications describes brown copper oxide in detail and shows where and how it can be used most economically. It also highlights the research and experimental programs carried on its behalf. The booklet may be obtained by checking No. 6495 on the coupon and mailing it to Croplife.

No. 6496—Process Control

A new 16-page catalog on pneumatic instruments for process control has been published by United States Gauge, Division of American Machine & Metals, Inc. Catalog No. 505 discusses indicating pilots, transmitters and receiver gauges. A new instrument shown for the first time in the catalog is the 3½-in. scanning diaphragm receiving gauge with rotatable dial which permits the operator to rotate the dial to a common set point. The pilot is claimed to be unique in that it provides both input and output gauges and features a large dial showing both set point and proc-

ess variable. Complete information is contained on measuring elements for pressure and temperature applications. Ordering information, dimensions and typical dial faces are also included. Check No. 6496 on the coupon and mail it to Croplife to secure the catalog.

No. 6497—Valve Closure

An automatic valve closure which the manufacturer, Hudson Pulp & Paper Corp., says virtually eliminates sifting from multiwall bags has been developed, and is scheduled for immediate introduction for use. The Hudson product is known as the Seal-O-Matic Sleeve. It is an insert to be used in the loading of pulverized, granular, crystal and pellet-type products. Company officials say that the device will be effective in the loading of fertilizer, chemicals, lime and other products for which, at present, the annual loss from sifting is high. To secure more complete details check No. 6497 on the coupon and mail it to Croplife.

No. 6498—Insecticide Spray Gun

The R. C. Can Co. has introduced an insecticide spray gun with a number of new features. Among the fea-

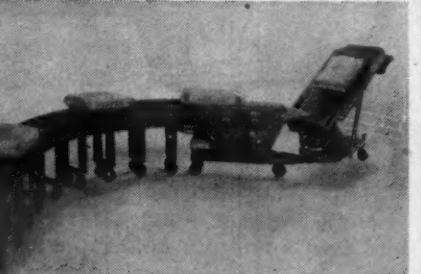
tures claimed are: It sprays the insecticide at an extreme angle for hitting the underside of foliage; 15 holes on the underside of the discharge plug eliminate clogging; a 1½-in. friction plug comes off for refilling; it has a wax coated inner tube; it has a special felt inner valve and a patented bellows valve. Secure additional information by checking No. 6498 on the coupon and mailing it to Croplife.

Also Available

The following items have appeared in the What's New section of recent issues of Croplife. They are reprinted to help keep retail dealers on the regional circulation plan informed of new industry products, literature and services.

No. 5553—Car Loader

Officials of the R. T. Sheehan Co. have announced new additions to the firm's system of one-man push button loading of boxcars and trucks. The firm's Stacker Car swings manually 180° off from the end of the Flex-Bend (see picture) and raises, lowers, moves forward and reverse with push buttons. The operator guides the Stacker Boom to the spot where he wants to place the bag. The Stacker Boom has an 18 in. wide belt and comes in two lengths, 6 ft.



and 8 ft. It raises to a height of 84 in. and lowers to 18 in. from the floor. The speed of the Flex-Bend and Stacker Boom is set to handle twenty 100-lb. bags per minute with one man operation. The car loader is made up of four component parts, stacker car, belt drive car, power traveler car and center cars. Center cars are added to give the overall length. Secure more complete details by checking No. 5553 on the coupon and mailing it to Croplife.

No. 6491—Pipe Joint

The Smith-Scott Co., Inc., has developed a new type of steel pipe field joint, which is claimed to reduce the cost of laying pipe in the ground. It is called a "ring-seal field joint." The company states that "the joint embodies a self-sealing rubber gasket, which locks securely into place in a special key-way. This results in considerable flexibility, while guaranteeing leak-proof joints. It is said to be simple enough to be installed by unskilled labor." The joint is made by pushing the spigot end of one pipe three or more inches into the balled end of another, thus placing the "ring-seal" gasket under compression. As the water pressure mounts in its initial flow through the pipe, the gasket moves to one side of the groove and "feathers" out. Once in that position, the joint is claimed to be as strong as the pipe itself. The

Send me information on the items marked:

<input type="checkbox"/> No. 5552—Boilers	<input type="checkbox"/> No. 6492—Catalog
<input type="checkbox"/> No. 5553—Car loader	<input type="checkbox"/> No. 6493—Booklet
<input type="checkbox"/> No. 6486—Anhydrous Systems	<input type="checkbox"/> No. 6494—Soil Conditioner
<input type="checkbox"/> No. 6487—Gardening Booklet	<input type="checkbox"/> No. 6495—Booklet
<input type="checkbox"/> No. 6488—Applicator	<input type="checkbox"/> No. 6496—Process Control
<input type="checkbox"/> No. 6489—Brochure	<input type="checkbox"/> No. 6497—Valve Closure
<input type="checkbox"/> No. 6490—Equipment	<input type="checkbox"/> No. 6498—Spray Gun
<input type="checkbox"/> No. 6491—Pipe Joint	

NAME

COMPANY

ADDRESS

CLIP OUT—FOLD OVER ON THIS LINE—FASTEN (STAPLE, TAPE, GLUE)—MAIL

FIRST CLASS
PERMIT No. 2
(Sec. 34.9,
P. L. & R.)
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MINN.

BUSINESS REPLY ENVELOPE

No postage stamp necessary if mailed in the United States

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, provides
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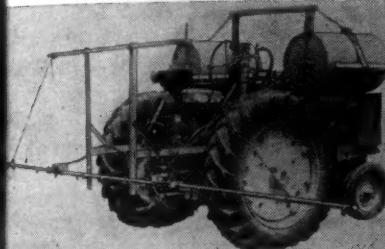
Company's pipe equipped with the new joints is sold in diameters of 20 in. and in lengths up to 40 ft. The joint also allows from 4-6° deflection. More complete literature on the joint is available. Check No. 6491 on the coupon and mail it to Croplife.

No. 6492—Test Gauge Catalog

A new 8-page catalog just published by United States Gauge, Division of American Machine & Metals, Inc., deals with the selection of test gauges, also cataloging a variety of test gauges for various applications. The publication (No. 400) provides a list of check points for ordering pressure gauges, and is available by checking No. 6492 on the coupon and mailing it to Croplife.

No. 6483—Liquid Applicator

Details of the new "all-purpose" liquid applicator suitable for both insecticide and herbicide applications, as well as for liquid fertilizer, have been announced by the Larson Machine Co. An outstanding feature claimed for the basic applicator unit is that it can be fitted with inexpensive at-



achments to make diversified applications while plowing, discing, planting or cultivating. It is a new concept for farm operation because of its flexibility, company officials state. Details are available by checking No. 6483 on the coupon and mailing it to Croplife.

No. 6490—Fertilizer Equipment

Edw. Renneburg & Sons Co. has released a new 12-page bulletin describing its continuous granular fertilizer processing equipment. The bulletin covers ammoniators, granulators, continuous combination ammoniator-granulators, dryer furnaces, dryers, coolers, combination dryers and coolers, air handling systems and pilot plant equipment. Included are equipment photographs, plant shots and detailed drawings. There is also a layout of a fertilizer plant using typical Renneburg equipment and a granular fertilizer unit flow sheet. Secure the bulletin by checking No. 6490 on the coupon, clipping and mailing it to Croplife.

No. 5552—Boilers

A new folder describing the Nebraska Water Tube Boilers has been released by the Nebraska Boiler Co., Inc. The folder describes the features of steam generation, heat transfer, combustion, firing equipment and controls, performance and accessibility. A detailed chart showing ratings and data of the various models of N-B boilers also is included. For a copy of this booklet, please check No. 5552 on the coupon and mail it to Croplife.

No. 6489—Soil Sterilant Brochure

An 8-page, illustrated brochure, which describes how soil fumigation increases yields of many crops has been published by Stauffer Chemical Co. The new publication claims that malnutrition and drouth have often been blamed for crop failures whereas root and seed-attacking fungi and nematodes were the real culprits. The

brochure outlines methods of fumigating the soil by applying Stauffer's temporary soil sterilant, Vapam. Various application methods such as a sprinkling can, hose proportioner, sprinkler, deep injection, shallow injection, plow sole application, flood irrigation or sprayer may be used. The fumigant is said to kill all soil pests, including fungi, nematodes, weeds and weed seeds, and then evaporate as a harmless gas. It has been used in treating both seed beds and fields in all U.S. climates. Secure the brochure without charge by checking No. 6489 on the coupon and mailing it to Croplife.

OVER THE COUNTER

(Continued from page 9)

dealer intended when he wrote that credit policy copy.

However, lest the honest farmer or anyone else get the idea that once he obtains credit here he can take a long time in paying up, the following copy disillusioned him, "No credit allowed beyond 30 days."

A sign like this will deter many a poor credit risk from applying for credit, and it will also impress upon many farmers the advantages and the necessity of paying for merchandise within a specific time limit, if credit is given.

The words "Absolutely no credit" is interpreted as a slap in the face by many customers because it is too rigid. The copy quoted earlier is much better psychologically. It imposes practically the same restrictions as the "Absolutely no credit" sign, but it does so in a gentler, more good-will building manner. Many dealers consider bills paid in 30 days as cash business, and yet here is a dealer who says the credit limit is 30 days from time of purchase.

For the dealer who does not wish to extend credit at all or for longer than 30 days and who has discussed the matter with local bankers can add this line to the sign: "If you need long-term credit in buying fertilizer our local bankers will be glad to discuss the matter with you."

Here again, copy like this is informing the credit applicant where he can go to make inquiries about getting credit when he buys fertilizer.

One dealer states that his most successful method for getting the cash is to have check books on the counter from every bank in the county. These books are displayed right where the farmer leans on his elbows and talks to the dealer. A pen and ink is also handy. "Many farmers will select a check blank and write a check for what he is buying, when you make it handy for him to buy for cash," the dealer says.

Small Business Loans to Fertilizer Firms Approved

WASHINGTON—Approval of several small business loans to fertilizer firms were announced recently by Wendell B. Barnes, administrator of the Small Business Administration. They were to:

Northern California Fertilizer Co., San Jose, Cal., fertilizer manufacturer, \$72,500; Cornland Manufacturing Co., Grinnell, Iowa, fertilizer manufacturer, \$125,000, and Marreng Fertilizer Co., Demopolis, Ala., fertilizer dealer, \$20,000.

RESEARCH CONFERENCE

CHICAGO—The 1957 Farm Equipment Institute Industry - Research Conference will be held April 2-3 at Stillwater, Okla.

Better Selling

Richer Sales Fields for Dealers

MISSISSIPPI DEALER

(Continued from page 9)

Meridian with 17 tons for delivery the following morning.

"We are able to get in touch with many farmers in the region during the spring season through our fertilizer service," reports Guy Kynerd, "and this is when many of them are thinking of purchasing tractors and other farm machinery. We find that fertilizer contacts help us sell new and used farm machinery, too. Thus the two lines work very well together."

The Kynerds do sell fertilizer out of the warehouse. Not every load of 17 tons can be sold along the farm routes as they come in, but many can. Several hundred tons are frequently carried in stock at the Kynerd headquarters to take care of drop-in demand. The firm sells well over 1,000 tons of fertilizer per year, since it has effected the hauling arrangement.

2. Hauling own machinery. The Kynerds also haul most of their own farm machinery for their area from the factory. The truck and trailer make the 1,100-mile trip to Charles City, Iowa, quite often, and thus many freight charges are made. The savings help to pay for the truck and trailer fleet, too.

3. Financing. The financing deal for this expensive equipment was handled through the cooperation of a Meridian bank, which reviewed the earning power of the three trucks. Mr. Kynerd and his son expect to pay for the three trucks within a two-year period. The wear on such a truck fleet is considerable, but it is expected the equipment will be quite serviceable for several years after the initial two-year payment plan.

This sort of an arrangement has put the Kynerd Implement firm into the fertilizer business at a profit, report father and son, and it benefits their farm machinery business a great deal. With fall fertilization now accounting for more and more volume every year in the southern states, the Kynerds envision a fine fall busi-

ness on the line. This, they say, will help take up the lag when farm machinery generally moves slowly.

The Kynerds work with the chamber of commerce and other groups in the area in improving agriculture. This type of work, says Guy Kynerd, helps the firm to help the farmer and also increases the number of contacts with farmers.

One big agricultural event which takes place in Meridian annually is an 11-county "calf scramble." About 31 purebred calves are given to qualified 4-H boys who can catch them at a large "calf scramble" witnessed by thousands of people. It costs a merchant \$250 to sponsor one of these purebred little bulls, and the boy who wins one must not sell it for 2½ years.

This program, expensive as it seems has helped to build up the purebred cattle population of an 11-county area. More than 260 young bulls have been given away on this basis in the last nine years. The Kynerds cooperate in putting on the "calf scramble" and handling it. They also aid in other agricultural projects of the chamber.

Along with the "calf scramble," a scramble queen and king are elected. This year there were 142 floats and 12 marching bands in a scramble day parade. The Kynerds usually have a float in this big parade each year.

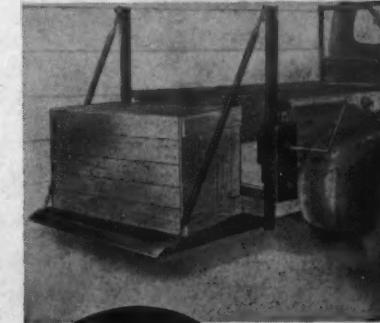
Research Appointment

LOS ANGELES—Dr. David Stern has been named assistant manager of the Whittier (Cal.) research laboratory of American Potash & Chemical Corp., according to an announcement by Dr. William Emerson, manager of the laboratory. Dr. Stern previously had been head of the research lab's electrochemicals section since he went with the company in April of 1955.

NEW GREENHOUSES

MOSCOW, IDAHO—New greenhouses designed for agricultural research will go into service this fall at the University of Idaho.

Order Direct... Save \$150 to \$170 New MID WEST Jiffy-Lift



A "Packaged" Kit Completely Assembled. Ready to attach with 6 bolts. Install It Yourself and Save.

\$229⁵⁰
ONLY

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Including Federal Excise Tax

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A "Freight elevator" on the back of your truck permits one man to handle up to 600 lb. loads. Patented mechanical lifting mechanism. Ball bearings throughout for easiest operation. Has all important safety features. Long life—NO maintenance problems. Heavy gauge steel ramp-type gate lifts from ground to truck floor and swings upright. Weighs only 175 lbs. Won't increase license fee. No overload springs necessary. Install in your own shop. Order direct from Distributor or Factory.

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Please ship us "Jiffy-Lifts"

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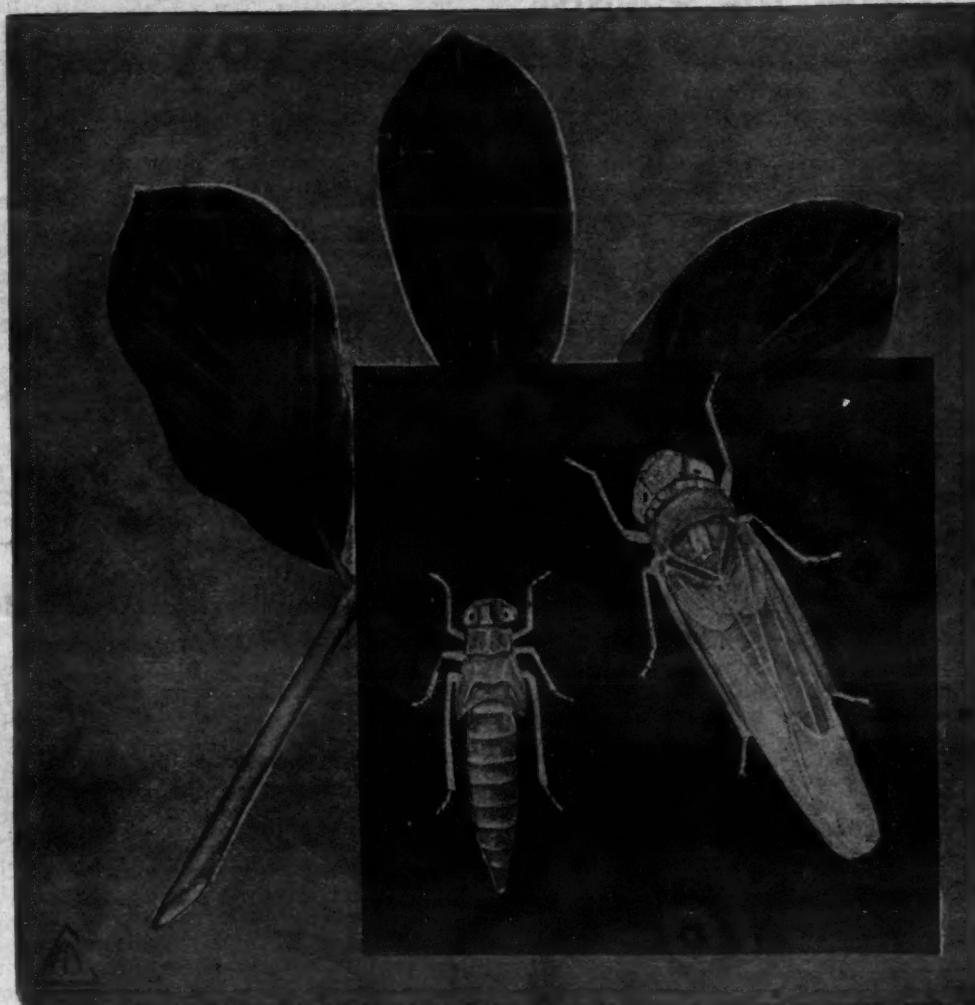
Please ship G.O.D. ().

() Please send descriptive literature No. 106.

BUG OF THE WEEK

Mr. Dealer--Cut out this page for your bulletin board

Potato Leafhopper



How to Identify

This leafhopper is a tiny, pale-greenish insect, usually found on the undersides of leaves. The adults fly when disturbed, but the tiny nymphs scamper for cover traveling sidewise.

Damage by Leafhopper

Young and adult forms of this insect feed on the undersurface of leaves by sucking the plant juices. The leafhopper transmits to the plant a substance that causes a disease condition called "hopperburn," the first symptom of which is a triangular brown spot at the tips of the leaflets. Later, the entire margins of the leaf may curl upward and turn brown as though they had been scorched. Badly affected plants die early, thus reducing the yield of potatoes. The insect, in all stages, sucks the juices from alfalfa plants, stunting them and reducing yields of hay.

Habits of Leafhopper

The pest is found throughout the year in Florida and other Gulf States, but appears in the north usually in April or May. Since they

have never been found in colder climates in the winter, it is thought that the pest migrates from the south. Early in June, they move in large numbers to potato fields and deposit eggs in the tissues of the plants. In about a week, the eggs hatch into wingless nymphs. These nymphs pass through five stages and become winged adults in from 10 to 14 days. The period from egg to adult requires about 21 days, and there may be as many as six generations in a single season.

Control of Leafhopper

Either spraying or dusting of a number of modern insecticides has proved to be effective in control of leafhopper. Materials used for this purpose include toxaphene, chlordane and DDT. Growers are advised to begin control operations when the insects first appear and repeat the treatment as often as necessary. Recommendations for the use of various materials vary considerably from state to state. For specific information about the time, rate and methods of application best suited to a given locality, growers are urged to consult local agricultural authorities.

Potato Leafhopper drawing furnished Croplife through courtesy of Hercules Powder Co.



FARM SERVICE DATA

Extension Station Reports

Fertilizer tests conducted on fine sandy soil near Substation No. 12 of the Texas Agricultural Experiment Station show that cotton and grain sorghum respond profitably to nitrogen, phosphorus and potassium applied in combination at or before planting time.

The greatest response resulted from application of the first 30 lb. of nitrogen. After the nitrogen deficiency was satisfied, there was response to both phosphorus and potassium.

Applications of 30 lb. each of nitrogen, phosphorus and potassium are recommended for cotton and sorghum grown on light sandy soils.

Such an application has resulted in a 200 lb. increase in lint yield of cotton and about 800 lb. increase in sorghum grain per acre.

On light sandy soil, a dollar spent for proper fertilization of cotton has brought a return of about \$4.

★

In experimental studies on control of oat leaf spot, plots of grain protected from natural infection yielded 51% more forage and 67% more seed than did unprotected plots, plant pathologist Robert W. Earhart of the South Carolina Agricultural Experiment Station has reported.

Oat leaf spot, caused by the fungus *helminthosporium avenae*, occurs in varying degrees in all South Carolina oat fields every season. Disease surveys in the 1954-56 period showed it was found more frequently than all other oat diseases combined.

Practical control can be had by (1) rotating all oat land and (2) treating all oat seed with an effective mercurial seed-treating fungicide, Mr. Earhart recommends.

★

Picked out cotton fields offer ideal places to plant oats or wheat for grazing and for cover crops, according to W. R. Thompson, Mississippi extension pasture specialist.

Sod seeding is ideal for doing this job, he said. The sod seeder is so spaced that planting is done on the shoulder of the row and the middle is not disturbed and subject to bad winter erosion.

Fertilizer recommendations for sod seeding are 500 lb. of a good mixed fertilizer per acre, or if phosphate and potash have already been applied this year, 40 to 60 lb. per acre of nitrogen.

Lack of fertilizer and too early planting of the sod seeded plants have been a major cause of some sod seeding failure in the past, Mr. Thompson said. These problems can, with good management, be overcome.

★

Although the number of farms in Louisiana has declined from 210,000 to 110,000 in the past 25 years, the acreage per farm has increased from 60 to more than 100 acres. The total crop land is about the same. The yield per acre has increased from 25 to 50%. That means that half the number of farmers are producing 125 to 150% more production on the same amount of land as they did 25 years ago.

Dr. J. Norman Efferson, dean, Louisiana State University College

of Agriculture, in glimpsing into the future of agriculture in Louisiana says:

"When we take a look at specific major crops in Louisiana, we see that cotton production has increased 200%. It has gone from 200 to 400 lb. per acre. Rice has gone up 25%; sugar cane has increased 40%, and strawberries, 25%.

"In our livestock enterprises we see that milk production is twice as great as in the 'thirties. Each hen is producing 25% more eggs. In addition, the number of beef cattle has doubled.

"The final picture is represented in cash income. That has increased from \$200 million to \$400 million per year.

"Because of increased demand for food and shortage of land, prospects are excellent for the farmer of the future and especially for the Louisiana farmer.

"If farmers in their long-time planning wish to take advantage of these opportunities, they are going to have to increase their efficiency and yields in order to stay in business over the difficult periods."

★

Virginia Polytechnic Institute specialists point out that brown spot on tobacco, which ordinarily shows up fairly close to harvest time, occurs most frequently in potash-deficient soils. Careful fertilization the following year will help to correct this condition, they say.

★

Dr. George Bradley, assistant horticulturist at the University of Arkansas' Agricultural Experiment Station, has reported on experiments conducted in Bradley County in which higher yields of better quality tomatoes were obtained from limed plots. Blossom end rot was significantly greater on unlimed plots than on limed plots. However, this reduction in blossom end rot is reported for one year only, and Dr. Bradley points out that additional experiments are needed.

In 1956, 202 baskets of marketable tomatoes were harvested per acre on the limed plots, whereas only 147 baskets were harvested per acre on the unlimed plots.

The total yields for 1956 were considerably lower than for 1955, when the limed areas produced 405 baskets of marketable tomatoes per acre as compared to 338 baskets on the unlimed plots. However, the difference in yield of marketable fruit in favor of the limed plots remained about the same in the two years.

There was more cracked fruit on the unlimed plots and the average size of marketable fruit was smaller than that produced on limed areas, Dr. Bradley reports.

★

A good turf around the base of a tree — generally desirable — means that enough fertilizer should be applied to take care of the needs of both turf and tree.

Virginia Polytechnic Institute specialists say a thick turf of grass is likely to benefit the mat of tree-feeding roots in the top soil, because the cooling effect of the turf tends to protect tree roots from excessive

heat in the summer. On the other hand, such grasses are powerful competitors for plant food in the top soil, and grass roots and tree-feeding roots are intermingled.

★

Two applications of 2,4-D per year for two to four years are needed to control wild garlic or "wild onion" in permanent pastures, according to E. C. Turner, Clemson extension conservationist. He says one application should be made in the spring and one in the fall.

He explains that two sprayings each year are necessary. One spraying will kill the growing plant, but it will not kill the dormant bulbils at the base of the plant. These bulbils will germinate as soon as there is sufficient moisture in the soil and will grow off the next season. It is necessary to continue the applications until the plants from these bulbils are killed.

The application in the spring should be made as early as possible but not until the temperature is 65° F. or above. The fall application should be made after the wild onions have begun their growth and before the temperature gets below 65°. It usually takes spring and fall applications for two to four years to bring the pest under control, and occasional applications will probably be necessary in after years to maintain control, Mr. Turner said.

IRRIGATION SHORT COURSES

LINCOLN, NEB. — Agricultural short courses on irrigation water management and management of irrigated soils are scheduled at the College of Agriculture, University of Nebraska here Nov. 26-Dec. 21.

Better Selling

Richer Sales Fields for Dealers

Spencer Reports Profit, Sales Improvement

KANSAS CITY—An improvement in net profits and sales over a year ago was reported by Spencer Chemical Co. for the first quarter of its fiscal year ended Sept. 30.

Net earnings for the quarter amounted to \$733,519, equal to 52¢ a common share, after preferred dividends, compared with \$564,068, or 37¢ a share, a year earlier.

Net sales for the quarter were \$9,070,672, up from \$7,717,696 in the same 1955 period. The increased volume resulted from the substantially higher sales of polyethylene. As to sales of nitrogen products, the company stated that, as in the past, a seasonal slowdown occurred during the quarter, and that increased competition resulted in some reduction in selling prices.

For the 12-month period ended Sept. 30, net earnings amounted to \$6,093,936, equal to \$4.88 a common share, compared with \$5,021,367, or \$3.90 a share, a year earlier. Net sales were \$46,977,925, against \$37,118,458.

Directors have voted the usual quarterly common dividend of 60¢ a share and the quarterly preferred dividend of \$1.05 a share, both payable Dec. 1 to holders of record Nov. 9.

HORTICULTURIST NAMED

STATE COLLEGE, N.M.—A full-time horticulturist has been employed by the New Mexico A&M Experiment Station to work on fruit and vegetable problems in the Middle Rio Grande Valley. He is Mohsen Nour, a recent graduate of the University of Missouri, where he received his master's and doctor's degrees.

for
Anhydrous
Ammonia
Nitrogen-Shooter Series "10"
features 14 ft. tool bar, roller
chain drive, 5 spring tine
applicators and 150 gallon tank.



for
solutions,
aqua and mixes
the new BLUE
"Chemi-Spreader" is equipped
with the Model "LF" metering
pump and folding
"Dribbleboom,"
thoroughly
field tested.

BLUE CO., Inc.

Huntsville, Alabama

DEPENDABLE FARM EQUIPMENT SINCE 1886

BLUE
DOES
IT!

BLUE
LIME
PRODUCT

There is
a Blue trailer
or tractor mounted
applicator for every need.
Send for new catalog.

*if your product is marketed
through distributors and dealers...*

Croplife is for YOU!

AN IMPORTANT EXCLUSIVE is available to advertisers whose agricultural chemical products are marketed through distributors and dealers. It is Croplife's unique *regional crop-area circulation plan*, carefully developed to fill an urgent need in the industry's marketing and advertising facilities—the need of advertisers to reach the dealers and distributors and farm advisers with an up-to-date story of their products and their consumer promotion plans.

THIS IS THE PLAN: In addition to the weekly circulation to manufacturers and formulators, Croplife is distributed on a regional crop-area basis to the dealer-distributor-farm adviser segment of the industry. The merchandising section in each issue of Croplife is specifically edited for dealers in one specific region. This carefully planned editorial formula insures intense reader interest.

More than 15,000 DEALERS, 1,700 custom operators and 1,000 farm advisers receive the issue of Croplife specifically edited for their regional crop-area once each four weeks. The mailing schedule for this group covers consecutively four geographic regions of the United States (see map) with one of four regional dealer issues: The Northeast Dealer Issue, the South Dealer Issue, the Midwest Dealer Issue or the West Dealer Issue. Each week Croplife goes to more than 4,500 dealers, distributors and farm advisers in one of these four regional crop-areas.

THIS CIRCULATION EXCLUSIVE is available only through Croplife. The regional crop-area circulation to dealers has been carefully developed to fit the particular needs of the agricultural chemical industry. Many individual products have been developed and approved and are being sold for use on a specific crop; therefore, marketing and promotion plans must be directed specifically to the appropriate crop-area. Croplife's dealer circula-



In addition to its national coverage, Croplife offers a selective regional circulation plan in these crop-areas

tion developed along crop-area lines offers advertisers the *most flexible medium possible*, designed to give "direct-hit" coverage for specific messages without the higher cost of a larger-than-necessary circulation on an inflexible nationwide basis. Advertisers interested in reaching dealers in more than one region can do so easily and economically with a selective advertising schedule.

HOW TO USE THE PLAN: Select the regional crop-areas—Northeast, South, Midwest or West—in which you need to reach dealers, distributors and farm advisers with the up-to-date story of your products and your consumer promotion plans. Plan your message to inform and to educate this group. Then, select the appropriate issues of Croplife to carry your advertisements. Croplife's printed circulation statement outlines the four regional crop-areas in detail and gives the issue-by-issue mailing schedule. Ask us for a copy.

AND NOW—4000 more selected dealers have been added!

BEGINNING IN 1956 this important circulation exclusive became even more valuable to advertisers who are reaching dealers through the pages of Croplife. An additional 4,000 selected dealers handling agricultural chemicals are now receiving the issues of Croplife edited specifically for their crop-areas. One thousand dealers in each regional area were screened and verified and have been added to Croplife's controlled circulation plan, bringing the

total number of dealers, distributors and farm advisers receiving Croplife to more than 18,000. Each week Croplife goes to more than 4,500 of these interested readers in one of the four regional crop-areas.

MAKE YOUR PLANS NOW to capitalize on this unique advertising opportunity, exclusively through the pages of Croplife.

WRITE-WIRE-PHONE for the full story of your advertising opportunity in

Croplife
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Alabama Retail Firm Stresses Promotion, Convenience for Customer in Sales Program

There are three definite ways in which the John A. Lamey Milling Co., Mobile, Ala. works to lower its costs of handling fertilizer and to increase the sale of it. And in today's competitive market, where some dealers give large discounts, thus demoralizing markets, the profit-minded fertilizer dealer needs to watch his costs.

John A. Lamey, Jr., president of the company says that the first step he uses in operating his fertilizer business profitably is to haul his own supplies by truck from Pensacola, Fla., some miles distant. In this way he gets the hauling charge and can get the fertilizer when he wants it. His truck and trailer which he uses for this job will hold 20 tons of fertilizer. The equipment is also used for hauling feeds and other supplies from time to time.

In some cases when a 20 ton load arrives at the Lamey plant, the bags need not be unloaded in the warehouse. Often, Mr. Lamey and his assistant, Clifford W. Brady, his brother-in-law, have lined up fertilizer orders, so that the big truck can unload at farm yards right from the trailer. This saves considerable handling and brings the fertilizer in quantity right to the farmer.

The process of getting fertilizer orders involves considerable telephoning, but the effort is worth while, Mr. Lamey reports. Sometimes a full or half load can be delivered en route on such a program.

The remainder of the fertilizer on a big load is stored in the warehouse where smaller trucks deliver it to farmers whenever their orders come in. Many customers also call for their own fertilizer, and this is encouraged.

The Lamey firm manufactures its own line of feeds and has a sizable mill covering several acres. The fertilizer, salt and hay warehouse is situated near a good drive-in road, and those three departments are identified by signs outside the warehouse doors.

This is the second step in the Lamey fertilizer program—to make it easy for the farmer to find the fertilizer warehouse and to be reminded of fertilizer through the sign, each time he comes to the mill for feed and other supplies.

"Farmers have become used to getting their fertilizer on trips to the city," says Mr. Lamey. "They will drive up to the fertilizer warehouse, park and come into the office if no one happens to be there at the moment to wait on them. No need to move their trucks from one building to the other. Even new customers see the fertilizer warehouse sign and park there when they want that product."

The third tenet in this successful merchandising program is weekly advertising during the season on fertilizer. Usually this means a Thursday ad on a weekly farm page issued by the local newspaper. Mr. Lamey also publishes a weekly feed ad, but the fertilizer ad is usually separate, and in a different location from the feed ad.

The fertilizer ad copy does not stress "fertilizer" as a general term. Mr. Lamey tries to be more specific and lists fertilizer by analysis and the price in 100 lb. lots and 50 lb. lots. There is an advantage in this, he says, in that farmers usually know the ton price, and the listing of the 100 lb. and 50 lb. price attracts the small lot buyers, who come to the

mill in large numbers during the season, as a result of these ads.

Mr. Lamey says that 4-10-7, 0-14-14, 6-8-4 and 6-8-8 are his best selling fertilizers. Corn and potatoes and vegetables are the main crops in the area. His ad copy also lists such items as basic slag, potash, nitrate of soda, agricultural lime, cottonseed meal, bone meal, organic fertilizer, sheep manure, peat moss, etc. The small lot buyer, looking at such an ad, has many suggestions for purchase.

This fertilizer and feed firm spends slightly over 1% of gross for advertising, Mr. Lamey reports. Now and then, in season, he will use radio spots.

The organization has five salesmen who concentrate mostly on selling feeds in the Mobile territory. However, during fertilizer season these men also pick up many fertilizer orders and aid in building specific delivery dates so that the big 20 ton hauling truck can unload fertilizer on the way back from Pensacola.

"We do a great deal of educational work on fertilizers and insecticides right at the mill when customers come to buy," reports Mr. Lamey. "They always seem to be interested in fertilizer combinations for various crops, dependent on soil sampling.

"Our salesmen on the road, too, are able to give advice on many fertilizer problems. However, in this state, the ag colleges, the state department of agriculture and the county agents do such an excellent job of getting fertilizer and insecticide information to the farmer, that our job in this respect is easier than it might otherwise be. Many farm meetings are staged hereabouts on farm problems and we attend them when we can to keep abreast on what they are talking about. We also make many new friends at such meetings."

Fertilization Key To Good Pastures, Says Mississippi Agronomist

STATE COLLEGE, MISS.—The main secret to having good permanent pastures year after year is fertilizing and managing them, according to W. R. Thompson, Mississippi pasture specialist.

"You won't have a good pasture by fertilizing it well one time and then skipping a number of years," he reminds farmers. "You will have to use a recommended amount of fertilizer every year."

All four plant foods—lime, phosphate, potash and nitrogen, are necessary for good pastures, he emphasized.

Recommended rates for lime are one ton for average land on sandy soil and two tons on heavier clay soils.

To keep good permanent pastures good, 300 to 400 lb. of 20% phosphate or 500 to 600 lb. of basic slag and about 100 lb. of potash are recommended by Mr. Thompson.

"If you figure the cost of this and then consider the grass it will grow, you will soon find it is not too costly," Mr. Thompson declared. "Look at pasture fertilization as an investment item, not a cost item."

He urges that these amounts of fertilizer be applied every fall, stating, "You cannot trade your pasture in on a new one as you would a tractor that breaks down, but you can certainly keep it repaired."

What's Been Happening?

This column, a review of news reported in Croplife in recent weeks, is designed to keep retail dealers on the regional circulation plan up to date on industry happenings.

A new model state fertilizer bill, which would change fertilizer guarantees for phosphorus and potassium from an oxide to the elemental basis, was approved by the Association of American Fertilizer Control Officials at its annual meeting in Washington. J. D. Patterson, Salem, Ore., was elected president of the group.

E. O. Burroughs, Jr., Royster Guano Co., Norfolk, Va., was named chairman of the fertilizer section of the National Safety Council . . . Harry J. Fisher, New Haven, Conn., was elected president of the Association of American Pesticide Control Officials.

The meeting of the fertilizer industry round table brought out up-to-date information on modern plant food manufacturing techniques during its three-day convention in Washington, D.C. About 300 persons were in attendance to represent all segments of the manufacturing industry.

A new name, "The National Fertilizer Solutions Assn." was adopted to designate a new group formed by the consolidation of the former National Nitrogen Solutions Assn. and a group of liquid complete fertilizer makers. The convention was held at Sioux City, Iowa, with some 300 persons registered.

Two new antibiotics, Anisomycin and Griseofulvin were successful in controlling powdery mildew of snap beans in greenhouse tests by the USDA, it was announced.

A U.S. Department of Agriculture survey turned up additional areas in New Jersey, Pennsylvania and New York that will need gypsy moth control measures in 1957. Plans call for from two to four times as much insecticidal spraying in 1957 as in 1956. . . Consignment selling and guaranteed merchandising sales were condemned during a session at the annual meeting of the Carolinas-Virginia Pesticide Formulators Assn. in Pinehurst, N.C.

Chemical Lime Co. of Oregon planned to build a \$1,250,000 chemical lime plant at Portland, Ore. Available lime is sufficient to supply the needs of the Pacific Northwest for the next 60 years, a company spokesman declared. Production will be 75,000 tons a year.

Grasshoppers posed a serious threat in New Mexico for 1957, on 2½ million acres of rangeland, and 196,000 acres of croplands in the state. A wide area of the state is affected in the insect threat.

The U.S. Tariff Commission reported that production of synthetic organic chemicals in 1955 was up 22% over the output of 1954. Pesticides and other organic chemicals exceeded the production of 1954 by 21%, the report said.

That unusually heavy populations of grasshoppers are present in Colorado, was found in recent surveys in the state. Some 438,000 acres of cropland were said to be infested with the insect, giving rise to predictions that next year will see major infestations. As always in making such predictions, the weather must be taken into consideration, according to Gordon Mickle, A&M College entomologist, but under conditions favorable to the development of grasshoppers, 1957 could see unusually heavy infestations.

The National Association of Commissioners, Secretaries and Directors of Agriculture met in San Francisco. The twin problems of pest eradication and the control of insecticide residues on harvested crops were covered by speakers.

Sugar beet acreages for the 1957 crop have been increased, the USDA announced. The national allotment is set at 885,000 acres as compared to 850,000 acres in 1956.

The Re-Mark Chemical Co. began a \$100,000 modernization program to increase its fertilizer output five-fold, the company said. Located at Homestead, Fla., the firm recently purchased the R. W. Brown fertilizer plant at Goulds, Fla. This new subsidiary will be known as Hurricane Fertilizer Co.

A report by the U.S. Bureau of Mines confirmed earlier reports by the American Potash Institute that production of potash was up slightly in 1955. The government report stated that consumption of potassium salts was up 4% in 1955 as compared to the previous calendar year.

The American Chemical Society was told at its 130th national meeting that if farmers would use fertilizers at levels recommended by state experiment stations, the extra income from this means would be more than government supports at 100% of parity. Dr. Russell Coleman, executive vice president, National Plant Food Institute, made the statement. Other speakers reported on tests made on various pesticides and plant foods at the Atlantic City, N.J., meeting.

That a curtailment of shipping through the Suez Canal would not be likely to halt shipments of pyrethrum into the U.S., was the expressed opinion of USDA officials in Washington, when asked about this possibility. It was noted that since the pyrethrum flowers come from the Kenya colony and Belgian Congo areas of South Africa, that by-passing the canal would not add materially to the length of the sea-water route to the U.S.

Tests of aerial fertilization of forests were reported on by Rutgers University, New Brunswick, N.J. Applying a complete fertilizer on an 11-acre stand of red pine, caused the 28-year-old trees to mature more rapidly. Tests were made in cooperation with the Nitrogen Division, Allied Chemical & Dye Corp., New York. Fertilizer used was a 12-12-12 grade.

Better Selling

Richer Sales Fields for Dealers



Doing Business With

Oscar & Pat



By AL P. NELSON
CropLife Special Writer

A tall, lanky man of about sixty-five came into the retail salesroom of the Schoenfeld & McGillicuddy Co., farm supplies, one late November day. Under his arm he carried a large black notebook. Seeing this man, Oscar Schoenfeld groaned. It was Mort Brinkman, the township assessor. He was a retired farmer who had held the office for about six years.

"Hello, Oscar," greeted Brinkman, who had the reputation of being a pretty good watchdog for the township. "How is business?"

"Rotten!" Oscar said fiercely. "You know how farm income has slipped the last few years. Farmers don't spend so much. And, ach, business costs go up every day. Maybe we'll have to close up soon. I dunno."

"Huh," commented Brinkman, pulling up a chair near Oscar's desk. "That's strange. I heard your partner, Pat, tell the hardware man at Rotary the other day, that your business was running about 12% ahead of last year."

A slow red overspread Oscar's pudgy face. "Oh, he did, did he?" he spluttered. "That man, ach, he doesn't know anything. All he can think of is spend and spend and talk and talk. And he never collects accounts. So many farmers owe us money. It's getting worse every day. I can hardly stand it any longer."

Brinkman smiled slightly. "Oscar, you fertilizer dealers remind me of farmers, and I was one myself once. It's the fashion to complain when times are good, just as when they are bad."

"Well," thundered Oscar, "times are bad around here, let me tell you. That Irishman doesn't know anything." His eyes narrowed. "Brinkman," he asked slowly, "ach, you are not going to raise our taxes this year, are you? They should be lower!"

"Hm," said the assessor. "It depends on how much stock you have on hand, and how many improvements you have made, and any extra machinery you have bought."

Oscar got to thinking about the warehouse addition he and Pat had built, over Oscar's fierce opposition, but he said nothing. He was too bitter.

"I see you have built an addition to your warehouse," Brinkman said, poised his pencil above his open book.

Oscar swallowed hard. "Ach, such an addition. It cost too much, the materials and the labor—it's crazy. You can't charge a man taxes on such inflated stuff. You can't—"

"How much did it cost?" asked the assessor relentlessly. "\$8,000?"

Oscar was tempted to agree, but stubborn as he was, he was honest. "\$9,500!" he wailed. "Ach, it was robbery, Brinkman. There ain't a warehouse that size worth it."

"We're assessing at 60% of value this year," Brinkman said methodically. "That will mean we'll assess that warehouse at \$5,700."

"Ach du lieber!" wailed Oscar, slapping his hand to his forehead. "We will go out of business with such taxes!"

"And I understand you bought another bulk spreader this spring?" asked the assessor. "How much did you pay for that?"

"Ach, that, too!" moaned Oscar, his face grey. "Brinkman, why don't

you take the whole business and send us to the insane asylum? Why don't you—"

"Oh, quit complainin', Oscar," said Brinkman. "All of you taxpayers are hollering worse than ever this year. The township has to live, too. We gotta plow your roads in winter, fix 'em in summer, provide fire and police protection, give education to the kids, provide street lights and fix up smashed bridge posts that drunk drivers run into every week. We ain't got no easy life, either, Oscar."

Oscar sat like a man stunned. "Ach, sometimes I wonder how we can stand it and how long. Every day the money rolls out, out, out, and nobody tries to stop it for a little while, except me. And sometimes Minnie."

"Well, Oscar, it's money that makes the world go round," Brinkman said. "We tax you, you pay us, and we use your money to fix up the farmer's roads so he can come into town more often to buy fertilizer and feed. And when you have good roads you can haul the stuff out to him. So—some of your money comes back to you and also some money that someone else spends. I heard it all explained by the banker at Rotary one day."

"Yeah," growled Oscar, angry again, "the tax money fixes up the farmer's roads so he can come to town more often. That I believe, all right. But he buys from us and hauls the stuff to the farm and uses it, and then sometimes he doesn't pay. Better he should stay on the farm sometimes, some of those fellers."

At this moment, Tillie, the plumpish bookkeeper, came back from the rest room. She smiled brightly at the assessor. "Oh, hello, Mr. Brinkman," she said.

"Hello, Tillie. Have you bought any thing new for your office this year?"

The plumpish bookkeeper smiled. "Oh, yes, I have a new de luxe typewriter, and we also have a new mimeograph machine—electrically operated!"

Oscar groaned, and Brinkman

looked at him sharply, and marked something down in his black notebook. Mr. Brinkman got up and went to the desk where Tillie sat and inspected the new typewriter. He also removed the hood from the new mimeo machine. "Uh, huh!" he said, and made some more figures in his black book. His eyes swept the office once more, and said, "Well, I have to be going. Lots of more checking up to do in this area."

At the desk, he stopped and looked at the dejected Oscar Schoenfeld. "Oscar," he said, "I just happened to think—there is a new farmer moved in next door to the place of my tenant Hansen on Rt. 3. His name is Downing. Hansen said Downing told him he was going to fertilize pretty heavy next spring. Maybe you fellows should go out and see him."

Oscar shook his head. "Ach, maybe his credit is no good. Why should we sell him and then wait for 60 to 120 days for our money? Newcomers are no good credit risk, or why are they newcomers? Why don't they stay put someplace and get ahead?"

The assessor sighed and went out the door. "I thought I was tight when I was farming," he said aloud, "but I am glad I know somebody is tighter." With a little smile he looked at the shining paper clip he had picked up from the floor near Oscar's desk, without Oscar noticing. Carefully, Brinkman put the paper clip into his vest pocket. He could use it, he decided sagely.

BITTER WEED CONTROL

COLUMBIA, S.C. — Bitter weed, the pest that gives milk a vile taste when eaten by cows, can be controlled by spraying with 2,4-D at a cost of about \$1 per acre, according to Robert Martin of the South Carolina Farm Bureau. Martin suggests spraying in March when the plants first begin to emerge. He recommends the spray as more effective than mowing, previous control method.



ALABAMA DEALER—Frank M. Bell, Mobile, Ala. farm supply dealer, is shown above by the modern billboard which helps to direct traffic into his store. The sign, directly in front of Mr. Bell's premises, has black, white and red lettering and can easily be seen by highway traffic. The copy is the same on both sides. Mr. Bell operates a one-stop store, where the farmer can buy feed, seeds, fertilizer, garden tools, insecticides, sprayers, farm hardware, baby chicks and other items. "You've got to go modern on sign display and service nowadays," Mr. Bell says. "These improvements show customers you want to get their business by trying to serve them better."

CROPLIFE, November 5, 1956

Casual Approach On Farmer Calls Gets Best Results

By AL P. NELSON
CropLife Special Writer

Farm supply dealers tell me that when you visit a farmer on his premises and try to sell him, you must not hurry, or appear to be hurrying. You must not make him feel that you are very anxious to hurry up the interview, sell him something and then be on your way to see another prospect. If you make this type of hurrying impression on him you will have a difficult time selling him anything.

On the other hand, if a dealer drives casually to call on a farmer, and by his tone of voice and his entire attitude shows the farmer that he is no hurry to make the next call, the farmer will usually "warm up" to such an approach, unburden him about his problems and often wind up by purchasing something from the dealer.

A manufacturer's salesman told me not long ago about a successful dealer with whom he travels the dealer's trade area now and then.

"I thought I knew quite a bit about selling to rural people," he declared, "but this dealer taught me a great deal. I was used to hurrying—like most other salesmen—trying to get in as many calls in a day as I could. But I am now adopting this dealer's tactic to some extent and I find that even other dealers like it."

He went on to say that this dealer would walk into a barn where the farmer was feeding or milking cows, greet the farmer, talk briefly with him about the weather, his cows, some other item and then slunk easily on a bale of hay or a box, anything else he could sit on. He looked in no hurry to go. He gave the impression that this was the order he had to make that day.

He visited quite a while with the farmer, got him to talk about anything. The whole atmosphere was relaxed and the farmer seemed to enjoy the visit. He frequently called the dealer by his first name. But before the end of the call, the dealer always managed to get around to the matter of fertilizer or equipment supplies and usually he got an order.

When the dealer got the order, he would fumble around in his pocket for an old envelope, letter or card and jot down the order. Or often he would tear an outdated sheet off the farmer's calendar and write the order on the back. Often the farmer would chuckle and comment, "You are a helluva business man—don't even have an order book with you."

What the farmer didn't know was that the dealer had an order book in his car and that after each call he drove down the road a bit and then stopped the car and transferred the order from the envelope or card or what not into the order book in a very neat manner. Then done he proceeded to his next call.

"I have seen this dealer call on a farmer in hot weather and lie down on the lawn, head in elbow and talk with a farmer," the salesman said. "His whole attitude was that of having all the time in the world for the one customer or prospect. He gave the impression that he had come especially to see this one farmer. And the farm folks responded to this approach."

The salesman said that while the dealer does not make nearly as many calls per day as some other dealers, his order book is usually filled with more sales per day than many other

SOUTHERN CONFERENCE

(Continued from page 1)

equipment," adding that "often in the spring of the year it is not possible to get on the fields at the right time."

The farmer must utilize his high cost item, namely labor, efficiently," he emphasized. "In the spring, labor loads on the farm are at their peak. For this reason, all operations possible need to be taken care of in advance."

The USDA scientist pointed out that all too frequently small grains and winter cover crops are not adequately fertilized at the time of planting. "Applying the proper amount of fertilizer at the time of planting is extremely important, especially if these crops are to be grazed," Dr. Nelson said.

Another advantage he stressed is that "if farmers purchase their fertilizers early, they can be sure of getting the analyses required as a result of soil tests."

W. R. Thompson, pasture specialist, Mississippi State College, told the conference that "it pays to band seed and band place fertilizer on most of our pasture grasses, clovers and legumes. Sod seeding is a method of pasture building and maintenance," he pointed out. "It offers an excellent means of controlling soil erosion, plus the growing of winter grazing crops in permanent sods without any damage to the next year's sod growth. This is not a new program. It has been used over a period of ten years and has proved its worth in pasture building."

Farmers do not like to break their good pastures. By using the sod seeding method, it is not necessary to break the pasture to plant and fertilize or interplant cereals in sod for special grazing period.

"The sod seeding principle has almost year-round use in the pasture program. Planting, using this principle, starts in March in seeding Dallis, Bermuda, Bahia, annual lespedezas and Sericea lespedeza. Following the harvest of small grain, hay or silage in the spring, Sudan, millet, sorghum and grain sorghum are planted, putting down fertilizer at the same time without losing the moisture in the early summer which often happens when land is broken."

"Early and late summer plantings of Sudan and millet can be made for summer grazing. Early in the fall, or just about the time pastures become dormant, cereals and ryegrass can be interplanted in the sod using a special type sod seeder."

"Cover crops can be planted on row crop land with the sod seeder and not disk it down and leave it subject to erosion during the winter," he concluded.

Dr. M. S. Williams, chief agricultural economist of the National Plant Food Institute, declared that "acres placed in the 'soil bank' can be enhanced in value with sound land management, including needed plant food."

"We must not let excess supplies of some farm products blind us to the continuing and pressing need for increasing efficiency in agriculture today," Dr. Williams said. "With the price-cost squeeze still a problem, more than ever before we must avail ourselves of every opportunity to lower the per unit cost of production."

"Farmers should study the 'soil bank' provisions in the light of their own farming operations and they should adapt to their farms those provisions which improve their overall economic well-being."

"The 'soil bank' has many features particularly adaptable to southern farming. And, if these practical features are used in farm planning in the South, they can result in a better balanced agriculture," he said.

Final speaker of the day was Dr.

ative to the sale of mixed fertilizers.

"In 1954, a subcommittee was appointed by the Southern soil research committee to survey the use of fertilizers in the South to determine what fertilizer ratios were needed. After studying all the information available, agronomists in the various states found that a surprisingly few ratios are necessary to take care of all soil conditions within the states."

"Selecting a list of fertilizer ratios with a minimum grade in each ratio was suggested by the subcommittee. States may select all of the ratios on the list or only part for their official recommendation. Of those selected, however, the minimum grade permitted would be the same throughout the southern region, while the number of grades permitted above the minimum grade would be the responsibility of each state. Only ratios with whole numbers were recommended by the committee," Dr. Fitts concluded.

CROPLIFE, November 5, 1956-17

American Potash Promotes Two in Research Posts

LOS ANGELES—American Potash & Chemical Corp. has announced two promotions in the research department of the company's main plant at Trona, Cal.

Dr. Donald Garrett has been named as assistant manager of the Trona research department, while Stanley Cohen has been appointed head of the new products section. Mr. Garrett succeeds Harold Mazza who recently was appointed manager of research at AP&CC's Los Angeles plant.

Dealers Short Course

BROOKINGS, S.D.—Fertilizer dealers will hear the latest results from fertilizer trials Nov. 30 at South Dakota State College. This is the date of the seventh annual fertilizer dealers short course, which will take place in the agronomy seed house.

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James W. Miller

Two Croplife Staff Members Assigned To New Positions

MINNEAPOLIS—Two staff members of the Miller Publishing Co., publisher of Croplife, have been assigned to new duties, announces Harvey E. Yantis, president.

James W. Miller, formerly assistant manager of the Kansas City office, has joined the company's New York office sales force as advertising sales representative. Thomas E. Letch, formerly on the editorial staff at the company's Minneapolis headquarters, has been transferred to Kansas City to serve as assistant manager in that office.

The Miller Publishing Co. publishes five business papers. Three are weeklies: Feedstuffs, Croplife and The Northwestern Miller. Two are monthlies: The American Baker and Milling Production.



Thomas E. Letch

lies: The American Baker and Milling Production.

Mr. Miller joined the Miller Publishing Co. in February, 1946, as editorial assistant in the Kansas City office. He has been assistant manager of that office for the past five years. Following his graduation from Kansas State College with a B.S. degree in agricultural journalism, he served for three years in the U.S. Army, two of them in Europe, during World War II. He and his wife, Betty, are the parents of two girls.

Mr. Letch, a 1950 graduate of the University of Minnesota school of journalism, was editor and advertising manager of several Minnesota and Wisconsin weekly newspapers before joining the Miller Publishing Co. in April, 1955. During U.S. Army service, he served in Japan. Mr. Letch, and his wife, Kathryn, are the parents of a boy and a girl.

OLIN MATHIESON PROMOTIONS

NEW YORK—John G. Alexander and Edward J. Mahler have been promoted in the legal department of Olin Mathieson Chemical Corp., R. E. McCormick, vice president and general counsel, has announced. Mr. Alexander has been appointed assistant general counsel. He will act for the general counsel in the latter's absence. Mr. Mahler has been named chief patent counsel. Both report to the vice president and general counsel.

Sales and Earnings Of IMC Show Gain

NEW YORK—Stockholders of International Minerals & Chemical Corp. at their 47th annual meeting held here Oct. 23 were informed that net sales for the first quarter of the current fiscal year were up 15.6% over the same period of the preceding fiscal year.

Sales for the three months ending Sept. 30, according to the report made by International's president, Louis Ware, amounted to \$18,477,000 compared with \$15,988,000 in the first quarter last year.

Earnings for the same period, Mr. Ware reported, were \$614,000 which compares with a loss of \$860,000 experienced in the first three months of last year largely as a consequence of the prolonged industry-wide strike in the Florida phosphate fields. This represented a net dollar increase in earnings of \$1,474,000, he pointed out.

Earnings per share of common stock for the three months ended Sept. 30, 1956, were 22¢ on the 2,337,257 shares outstanding compared with a loss of 41¢ per share on 2,329,887 shares outstanding Sept. 30, 1955.

Mr. Ware called the stockholders' attention to the fact that this marked the third consecutive quarter in which earnings exceeded those of corresponding quarters one year earlier.

He stated that net earnings for the nine calendar months through Sept. 30, 1956, were \$2,104,000 above last year, and were \$1,173,000 above the same period in 1954 when there was no strike. These earnings were equivalent to \$2.25 per share of common stock for nine months this calendar year, compared with \$1.36 for the same nine months in 1955.

WISCONSIN CONFERENCE

MADISON, WIS.—The Entomology Department of the University of Wisconsin has announced that the eleventh annual Wisconsin Insect Control Conference will be held Jan. 9-10 at the Loraine Hotel, Madison.



NEW DRUMS—Crag Glyodin fungicide is now being shipped to fruit growers in new white, green and red lithographed drums by Carbide and Carbon Chemicals Co., a division of Union Carbide and Carbon Corp. Glyodin is a liquid fungicide used for control of apple scab, leaf spot on cherries and brown rot in peaches interplanted with apples. The firm says that the main advantage of the new lithographed drum is that the label can't come off. It stays on the drum permanently, under all kinds of weather, storage or handling conditions, the firm states.

Gloomicides

My husband and I recently took my 11-year-old nephew to a stage show. He obviously enjoyed the jugglers and acrobats, but I felt a little uneasy when a scantily-dressed line of chorus girls came dancing onto the stage, clad only in a few dabs of green and white.

I stole a furtive glance at the boy, to see what his reactions would be. Soon he leaned over and whispered, "Aunt Margie, do you see what I see?"

I swallowed hard and thought fast, but he went proudly on, "Those ladies are wearing my cub pack colors!"



You always hear about the man who hit the jackpot, but the guys who built it up remain unknown.



The rising film star had been away from home for several weeks. Discovering that he would be delayed for several more hours, he decided to phone his beautiful wife. She happened to be in the bath at the time, so the newly-engaged maid answered the phone.

"Tell your mistress I won't arrive until 11 o'clock," the film star said. "Tell her to go to bed and wait for me."

"Certainly, sir," replied the maid. "And who shall I say called?"



Any car will last your lifetime if you're careless enough.

Rutgers Meeting Hears About Insect Resistance

NEW BRUNSWICK, N.J.—Studies of an enzyme which reduces DDT to a relatively non-toxic product were reported to the advisory council of the Thomas J. Headlee Fellowship in entomology at its annual meeting at Rutgers University here Oct. 26.

This enzyme, called DDT-dehydrochlorinase, is found in high concentrations in flies which are resistant to DDT and also appears in other insects such as the Mexican bean beetle which are difficult to control with DDT.

Fred C. Swift, who has completed his first year of fundamental research in entomology as a Headlee fellow, told the Council members he plans to determine which organs of insects are mainly responsible for detoxifying DDT. Knowledge of this sort could be useful in future insect-control work, it was pointed out.

Thomas M. Stevens, the other Headlee fellow, who is completing work for his Ph.D. degree, reported further studies of hyaluronidase, a spreading agent. Formerly known to exist only in wasps, bees and mosquitoes in the insect world, this enzyme was found by Mr. Stevens in non-venomous insects such as the roach. He has determined that this enzyme is located in the salivary glands of the insects and is thought to play a role in digestion and assimilation.

Dr. Franklin C. Nelson, Plainfield, N.J., senior technologist for Esso Standard Oil Company, was honored by Rutgers University and the Headlee Council for his long service to the Headlee Fellowship program.

Dr. William H. Martin, director of the Agricultural Experiment Station, commended Dr. Nelson in behalf of Dr. Lewis Webster Jones, Rutgers president.

The meeting was presided over by Dr. Harry L. Haynes of Carbide and Carbon Chemicals Division, Union Carbide and Carbon Corp., New York. He is chairman of the advisory council. The vice chairman is Dr. C. C. Alexander of Geigy Co., Inc., New York City.



NEW BEAIRD FURNACE—Installation of a \$160,000 stress relieving furnace has been completed at the Shreveport, La. plant of the J. B. Baird Co., Inc., J. Pat Baird, president, has announced. Vessels will be introduced into the furnace by a furnace car made up of eight four-wheeled sections and chain driven by a 10 horsepower electric motor located outside the oven area. The stress relieving process heats vessels to slightly below the critical range, then cools slowly. Its application reduces internal stresses caused by rapid cooling, cold forming, rolling, bending or straightening or by welding, the company says. The furnace will enable Baird to meet the requirements of an increasing number of states for stress relieved vessels used for LP-gas, anhydrous ammonia and petro chemicals, according to the firm.

TRADE MARKS

(Continued from page 3)

Chemical Laboratory, New Orleans, La. First use Aug. 29, 1955.

The following trademarks were published in the Official Patent Office Gazette dated Oct. 16, 1956:

Corotran, in capital letters, for insecticides and ovicides. Filed May 11, 1955, by Pittsburgh Plate Glass Co., Pittsburgh, Pa. First use May 14, 1955.

Nuggetform, in hand-lettered script outline letters, for fertilizer. Filed July 18, 1955, by F. S. Royster Guano Co., Norfolk, Va. First use July 1, 1955.

Nuggetized, in hand-lettered script outline letters, for fertilizer. Filed July 18, 1955, by F. S. Royster Guano Co., Norfolk, Va. First use July 1, 1955.

Orgurea, within diamond-shaped outline, for fertilizer. Filed Jan. 30, 1956, by Agriculture Products Corp., Danbury, Conn. First use Jan. 17, 1956.

North Dakota to Test Tree Belt Weed Control

FARGO, N.D.—Small scale demonstrations of chemicals for weed control in shelterbelts, when applied in the tree rows, will be conducted in all North Dakota counties this fall by the North Dakota Agricultural College Extension Service.

The demonstrations will be conducted by county extension agents on shelterbelts of cooperating farmers. The chemical will be applied before freeze-up this fall. Next June, a weed count will be conducted in both treated and check rows.

CHRISTMAS TREE INSPECTION

WASHINGTON—The U.S. Department of Agriculture reminds dealers and the public that, because of the gypsy moth, Christmas trees and evergreen boughs from Connecticut, Rhode Island, Massachusetts, most of New Hampshire and Vermont and numerous counties in Maine and eastern New York require federal inspection and certification before they are moved to areas not infested by this forest insect.



Ray Northrop

Ray Northrop in New Associated Sales Post

ST. LOUIS—Promotion of Ray Northrop from the position of assistant sales manager to manager of its agricultural chemicals division has been announced by Edmund C. Hyry, vice president of Associated Sales & Supply Co., St. Louis.

In his new capacity, Mr. Northrop will be responsible for the marketing of the company's agricultural chemicals bearing Associated and Check-est brands which are manufactured in two plants in St. Louis. Additionally he will be responsible for the marketing of the Monsanto, DuPont and other national brands of farm chemicals that the company distributes throughout the St. Louis trade area.

Mr. Northrop is a graduate of the University of Missouri, College of Agriculture, and has a background of experience with the U.S. Soil Conservation Service and the U.S. Corps of Engineers. He came to Associated in February of this year from Planetary Chemicals Co., when Associated took over the agricultural chemical interests of that company.

SCOTTISH EXPERT

(Continued from page 6)

anned and unplanned, which might cause deviations from the chosen conditions. Although assisted by an improved type of granulator developed during the course of the work, the improvement in granulation efficiency arose principally from meticulous attention to regularity and uniformity of process operation which was called for by the separate requirement that the product must all the time conform to the drying specification. Additionally, the characteristics of the raw materials, of the process and of the product must be studied and controlled as far as possible to give those steady operating conditions.

Washington Applicator's Meeting Scheduled

PULLMAN, WASH.—New developments in agricultural chemicals will be discussed at the Washington ground applicator's short course at Puyallup, Nov. 29-30.

This second annual short course covers chemicals for fertilizer, pest, disease and weed control applied by ground rigs. Safety measures and the new on poison residue dangers will be discussed. Chemical use on ornamentals, fruits and vegetables is included in the agenda.

The meeting is sponsored by the Washington Association of Ground Applicators, Washington State College and the Washington State Department of Agriculture. The conference will begin at 8:30 a.m. at the Western Washington Agricultural Experiment Station, Puyallup, Nov. 29.

American Potash Sales, Earnings Show Nine Month Gain

LOS ANGELES—Sales and earnings of American Potash & Chemical Corp. for the first nine months of 1956 were higher than in the comparable period a year ago, Peter Colefax, president, said recently in an interim report to shareholders.

Net sales for the nine months ended Sept. 30, 1956, totaled \$31,199,553, an increase of \$10,844,833 over the \$20,354,720 for the corresponding months of 1955.

Net income for the first three quarters of this year amounted to \$3,684,188, as compared to \$2,852,427 for the corresponding period in 1955. After deducting preferred dividend requirements, earnings were equal to \$1.91 per share on the 1,842,150 shares of class A and common stock outstanding as of Oct. 5. Earnings were computed on the shares outstanding at

that date to reflect the conversion into common stock of the company's \$7,000,000 issue of convertible subordinated debentures.

For the first nine months of 1955, net income was equal after preferred dividends to \$1.82 a share on the 1,471,412 shares then outstanding as adjusted for the two-and-one-half for one stock split in April of this year.

For the three months ended Sept. 30, 1956, sales amounted to \$11,242,707 as compared with \$6,525,866 in the same quarter a year ago. Net income was \$1,287,563, or 67¢ per share after deducting preferred dividends, against \$1,004,529, or 64¢ a share a year ago.

Florida Consumption

TALLAHASSEE, FLA.—Fertilizer consumption in Florida during September totaled 109,337 tons, according to the Florida Department of Agriculture. This included 54,091 tons of mixed goods and 55,246 tons of materials.

CROPLIFE, November 5, 1956—19

American Potash Plant Adds New Section

LOS ANGELES—A plant engineering section has been established at the Los Angeles plant of American Potash & Chemical Corp. to provide technical services as part of the company's expansion and development program.

Fred Torn has been named head of the new section, according to the announcement by Russell S. Sunderlin, manager of the Los Angeles plant. The new department will be responsible for design of new plant equipment and facilities. It also will work on improving existing processes and will make economic studies in connection with plant production.

MORE PEACH TREES

AUBURN, ALA.—Some 3,000 acres of new peach trees will be planted in Alabama this winter, according to John Bagby, Alabama Polytechnic Institute extension horticulturist.

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Cotton Harvest Near Completion in Mid-South

MEMPHIS—Speckled fields over the Mid-South last week testified that the cotton crop has been almost completely harvested. And as the white fields disappeared under the fingers of the pickers, patches of green—fields of winter cover crops, pastures and small grains—seemed to spring up overnight after beneficial rains of the last 10 days.

Extension officials in Arkansas, Mississippi and Tennessee said in their weekly crop reports that the cotton crop is nearly harvested and that the harvest of corn, rice and soybeans should be completed in a few weeks.

Mild weather and rain brought fast growth to early planted small grains in many parts of Mississippi, the Agricultural Extension Service reported. Planting in permanent pasture sods continued as most summer grasses approached the dormant stage.

Cotton picking in Arkansas was from three-fourths to nine-tenths completed in a large number of counties. The extension service said utilization of mechanical cotton pickers has speeded up the harvest along with good picking weather. The rice harvest was described as 75 to 90% complete.

Recent soaking rains in Arkansas had greatly helped winter cover crops. The peanut harvest was described as "fairly good."

The sweet potato harvest in west Tennessee is about completed with the crop yield short because of dry weather since June. However, the quality was reported "very good."

Rain is still lacking for best results in fall seeding and winter cover crop growth. Showers have relieved the situation somewhat, but most counties report a need for general rain.

10 Million Acres of Wheat in Soil Bank

WASHINGTON—By Oct. 19, wheat farmers had signed 195,299 agreements covering 10,124,319 acres under the Soil Bank's 1957 winter wheat acreage reserve program, the U.S. Department of Agriculture announced Oct. 25. If the farmers signing agreements comply with the requirements of the program, they will be eligible for a maximum of \$187,819,709 in acreage reserve payments.

It is suspected now that the winter wheat belt final returns on the soil bank sign-up will well exceed the 11-million-acre mark.

Damage by Spotted Aphid Is Assessed

BERKELEY, CALIF.—The spotted alfalfa aphid, worst pest of California's big alfalfa industry, caused more widespread damage in northern California this year than last and continued its march across the U.S. But the outlook is not all dark.

A survey by University of California entomologist Ray F. Smith showed a general picture of steady gains by the insect, but with a few hopeful reductions in some areas.

Last year the pest caused damage estimated at \$13 million by the State Department of Agriculture.

Occupying almost a million acres of California farmland, alfalfa is the state's most important forage crop. The California crop and livestock reporting service valued the 1955 crop at \$132 million.

For practical purposes, the entire Central Valley is now infested, said Mr. Smith, and the coast is infested up to San Jose. Only the north coast and northernmost counties are still uninfested.

But in southern California, damage may have been less, said the U.C. associate professor of entomology and

parasitology. The reduction he attributes to "alert action of growers and increased activity of predators."

Natural enemies also slowed the aphid in Tulare County and elsewhere, Mr. Smith said. Fungus disease and predators attacked the aphid there, while in other parts of the San Joaquin Valley great swarms of lady beetles reduced the aphid to low levels and helped delay its expected summer increase until mid-July.

Ohio Firm Building New Liquid Plant

PLAIN CITY, OHIO—Henry Troyer & Sons are building a new liquid fertilizer manufacturing plant here. The plant, which will have a capacity of 15 tons an hour, is expected to be in operation about Dec. 1.

Sales will be handled through local elevators and dealer applicators. The plant is being engineered by Ellsworth Equipment & Engineering Co., Indianapolis.

AGRONOMISTS

(Continued from page 1)

each day in order to compress the broad meeting into its allotted time.

Sections designated in the program include soil physics, soil chemistry; soil microbiology; soil fertility; organic soils; plant nutrients; soil genesis; forest soils; soil conservation; crop breeding; crop physiology; crop production; seed production; turfgrass management; weed control; agronomic education; and a special program on military land use and management.

Although the Netherland-Hilton Hotel will be headquarters for the convention, facilities of the Sheraton-Gibson and Sinton hotels in downtown Cincinnati will also be utilized for some activities.

Officers of the American Society of Agronomy, in addition to Dr. Johnson, president, are A. G. Norman, University of Michigan, Ann Arbor; and L. G. Monthey, University of Wisconsin, Madison, exec. secretary.



J. W. Means

CHIEF CHEMIST—J. W. Means has been named chief chemist of the Chase Bag Co.'s General Laboratory at Chagrin Falls, Ohio, it has been announced by F. H. Ludington, Jr., vice president. Mr. Means heads a highly specialized research and development unit where Chase Bag products are subjected to rigorous tests. Various grades of textiles, papers, films and adhesives are analyzed before used as packaging components. Package endurance tests are conducted to discover the effect on Chase products of climatic and storage conditions, possible risks in handling, filling and emptying. Mr. Means joined Chase in 1952. He has been assistant chief chemist since 1954.

CARROT FERTILIZATION

GRANTS, N.M.—Commercial fertilizer applied to carrots brought Ralph Card a gross return of \$380 more per acre than where the vegetables were not fertilized. In 1956 the use of nitrogen and phosphorus increased the yield from 221 to 348 bu. per acre. The test plots were supervised by the Department of Agricultural Services at New Mexico A&M College.



Robert H. Walton

U.S. Potash Co. Announces Changes In Sales Personnel

NEW YORK—A number of organizational changes involving geographical shifts of personnel have been announced by the U.S. Potash Co. Division of United States Borax & Chemical Corp. The changes occur in the sales department.

L. Ralph Boynton has been made assistant sales manager, effective Oct. 1. Mr. Boynton has been southern sales manager for the past year and has operated out of the Atlanta of-



L. Ralph Boynton

fice since 1939. He will move to New York as assistant to John E. Fletcher, sales manager.

Robert H. Walton has been promoted to the position of manager of the Atlanta office, succeeding Mr. Boynton in that position. Mr. Walton has been with the company since 1933 and has been in the Atlanta sales office for the past six years.

Joe F. Stough has joined the organization as sales representative in the midwest territory formerly served by Col. Charles E. Littlejohn. Mr. Stough has been in the fertilizer business for over 30 years, having worked for many years with International

Harry R. Mitiguy Heads Green Pastures Group

BOSTON—Harry R. Mitiguy, former Bennington County (Vt.) agricultural agent now with the Federal Reserve Bank of Boston, has been elected general chairman of the New England Green Pastures Committee. He succeeds Louis A. Zehner, also of the Federal Reserve Bank of Boston.

Officers reelected to the New England Green Pastures Committee were J. Ralph Graham, Boscowen, N.H., vice chairman; Samuel F. Foster, Springfield, Mass., secretary; Walter E. Meeken, Boston, treasurer, and Francis Robinson, Boston, member at large.

Serving as chairman of the nominating committee was Harold J. Shaw of Sanford, Me., a former New England Green Pastures champion and early advocate of improved forage.

Bradford Crossmon of Amherst, Mass. summarized operations of the 112 leading farms in the New England Green Pastures Program for the past seven years. In his report at the recent annual Green Pastures Round-up in Boston. Mr. Crossmon noted the greater use of nitrogen and grass silage and the increasing efficiency of labor shown in more pounds of milk produced per man.

Grace Forms New Latin American Group

NEW YORK—The formation of a new Latin American paper and chemical group has been announced by W. R. Grace & Co. John T. Whitley, who has been elected an executive vice president, will be in charge of the group, and will specifically direct the company's expansion programs in paper and chemicals in Latin America.

WEED CONTROL

LAS CRUCES, N.M.—Ranchers in parts of New Mexico may now have a way of killing out drymaria weeds by spraying with 2,4-D. In Otero County the poisonous range weeds was eradicated in a four-acre plot by using this chemical. Also good results were obtained on the John Mitchell ranch near Mosquera.



Joe F. Stough

Minerals & Chemical Corp. and having resigned his most recent position as district manager for Davison Chemical Co. at Charleston, S.C. He will take over his new position as soon as Col. Littlejohn has had a chance to introduce him in that territory.

Col. Littlejohn will be given a leave of absence of sufficient duration to enable him to regain his health at which time he will be given other assignments within the sales department.

These announcements were made by Dean R. Gidney, vice president and general manager of the division.

MIDWEST MEETING

(Continued from page 1)

recommendations;" "What Makes a Good Soil;" "Fertilizer Response in Wisconsin;" "Plant Nutrient Deficiency Signs," and "Diagnostic Techniques in the Field."

Designed to help spur fall fertilizer sales, 200,000 copies of a new MWSIC folder entitled "Fertilize This Fall—Save Time, Money, Work" were distributed to dealers and farmers, and also to colleges and county agents, via MWSIC member companies. Also distributed were 300,000 copies of the color folder "Growing Profitable Alfalfa;" and 50,000 copies of "Signs That Show on Hungry Legumes."

A new slide set service for TV stations has been launched, the MWSIC secretary reported. These cover a variety of subjects dealing with profitable fertilizer use.

Fertilizer research and demonstrations by Midwestern agricultural colleges under MWSIC grants-in-aid are developing a valuable body of new information, Mr. Beers said.

Turning to the future, he cited the need for more educational, public relations and research work to encourage farmers to help build the tonnage of fertilizer toward the total usage for which there is a potential in the corn belt.

MWSIC members approved a budget for 1956-57 educational activities.

Other items on the business meeting program included reports of the membership committee, headed by J. D. Stewart, Federal Chemical Co.; the literature and film strip committee of which D. A. Williams is chairman; the fertilizer research committee, headed by L. E. Quiram, Illinois Farm Supply Co.; and the fertilizer demonstration committee, headed by A. R. Mullin, Indiana Farm Bureau Cooperative Assn.

A visual education session during the afternoon was devoted to a showing of TV slide set sequences, and to a preview of new color film strips, by Charles E. Trunkey, MWSIC assistant secretary.

In his featured talk of the morning, Dr. Butz discussed "Your Balance in the Soil Bank," stating that the purpose of soil bank reductions in acreages is designed to reduce surpluses gradually rather than to make an abrupt adjustment in a single year. The latter, he said, would disrupt both the farm economy and allied industries and enterprises which depend on farm production for their continued operation.

He quoted figures on the numbers of acres set aside in various crops for 1957 as follows: corn, 4.5 to 5.5 million acres; wheat, 13 to 15 million; cotton, 4 to 4.5 million; rice, 200 to 50 thousand; peanuts, 150 to 200 thousand; and tobacco, 100 to 125 thousand.

These estimates of reduced production, he said, allow for lower than average quality land expected in the acreage reserve, but not for possible higher yields on land remaining in production due to increased fertilization. The assistant secretary of agriculture said that participation patterns for 1958 and 1959 should roughly approximate the one for 1957.

The effect of the soil bank on the fertilizer industry, will be double-headed, he said. "To the extent that the acreage reserve reduces acres in basic crops, all of which are relatively heavy fertilizer users, it is inevitable that it will have a negative influence on fertilizer consumption. On the other hand, it is entirely probable that farmers will intensify fertilizer usage on the remaining acres in basic crops as well as on land devoted to other crops. Moreover, new seedlings in the conservation reserve acres will

use additional quantities of fertilizers," he said.

Dr. Butz presented figures showing a contemplated reduction of 400,000 tons of fertilizer because of the acreage reserve program, and an added 750,000 tons because of the conservation reserve program, making an estimated net gain of some 350,000 tons. He reminded, however, that this figure is of necessity "highly speculative," and represents the national picture which might in many cases differ greatly from local situations.

SOIL GROUP ELECTS

CHICAGO — Richard E. Bennett, president of Farm Fertilizers, Inc., Omaha, Neb., was named president of the Middle West Soil Improvement Committee at the group's annual meeting at the Sherman Hotel here Oct. 25. Mr. Bennett, whose term extends through 1957, succeeds W. M. Newman, Price Chemical Co., Louisville, Ky.

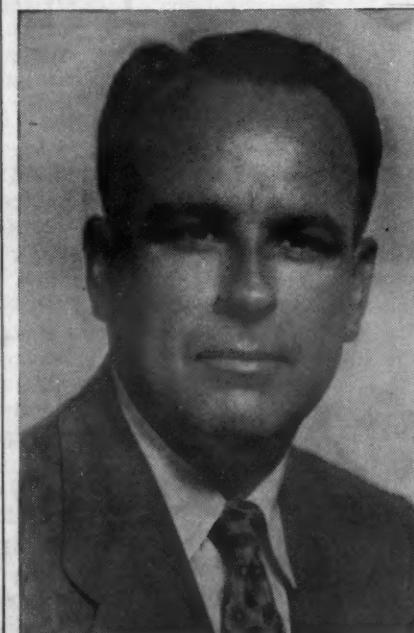
Other officers elected at the meeting included R. G. Fitzgerald, Smith-Douglass Co., Streator, Ill., vice president, and L. E. Quiram, Illinois Farm Supply Co., Chicago, treasurer.

Directors were elected as follows: Marshall Smith, Smith Agricultural Chemical Co., Columbus, Ohio; Merle Blue, Consumers Cooperative Assn., Kansas City, Mo.; R. E. Bennett, new president, and R. G. Fitzgerald, new vice president. W. W. Venable, Grinnell, Iowa, was named to fill a vacancy on the board.

Alfalfa Aphid Makes Entry Into Indiana

LAFAYETTE, IND. — M. Curtis Wilson, Purdue University entomologist, reports that the spotted alfalfa aphid has been found in seven southwestern Indiana counties. He believes that it entered Posey County during the latter part of August and had spread into Gibson, Knox, Vanderburgh, Warrick, Spencer and Perry counties by Oct. 15.

Mr. Wilson stated that it may threaten alfalfa over the entire state within another year. Research is being initiated at Purdue to determine the aphid's behavior in the region.



E. O. Burroughs, Jr.

HEADS SAFETY SECTION—E. O. Burroughs, Jr., F. S. Royster Guano Co., Norfolk, Va., was elected chairman of the fertilizer section, National Safety Council, at the section's annual meeting in Chicago Oct. 22-23. Mr. Burroughs has long been identified with the safety program in his own company, and has been prominent in the development of the safety movement on a national scale within the fertilizer industry. In accepting his new position, Mr. Burroughs succeeds Curtis A. Cox, Virginia-Carolina Chemical Corp., who was chairman of the national group during the past year.

White Bag Co. Buys Charlotte, N.C., Plant

SPARTANBURG, S.C. — John B. White, president of the White Bag Co., Spartanburg, paper bag manufacturers for the feed and flour industries, has announced the purchase of a plant at Charlotte, N.C., which will expand the firm's bag producing facilities.

The plant formerly was owned by the Hammond division of the Hudson

CROPLIFE, November 5, 1956—21

Pulp & Paper Co., and the transfer of properties was made recently. Around 40 persons are employed in its operation.

The White company bought interests of the Dixie Bag Co. in Charlotte in 1954 and moved the operation to Spartanburg. Besides John B. White, other key personnel in the firm are Robert L. White, executive vice president, brother of the president, and Seth Bostick, sales manager of both plants.



AT FERTILIZER SAFETY CONFERENCE—Many hazards inherent in fertilizer manufacture were discussed at the recent annual meeting of the fertilizer section of the National Safety Council at the LaSalle Hotel, Chicago. Top photo shows Curtis A. Cox, Richmond, Va., retiring chairman of the group, presiding at the opening session. Seated at the table are two other speakers, H. B. DeVinny, director of industrial relations, Davison Chemical Co., Div. W. R. Grace & Co., Baltimore, Md.; and C. S. Griffith, superintendent, fertilizer division, Virginia-Carolina Chemical Corp., Cincinnati, Ohio.

Second photo: Charles J. DeWitt, assistant divisional manager, Loss Prevention Dept., Liberty Mutual Insurance Co., Atlanta, Ga., with props he used to illustrate the hazards of being careless with the operation of electrical devices. The dummy, "Willie," in front of Mr. DeWitt, was used to show how easy it is for a person to electrocute himself by touching an electrical device and grounded metal, such as a water pipe, at the same time. Because the human body offers little resistance to current, a person can be killed before a fuse will burn out to stop the surge of electricity, he said.

In the lower photo, Vernon S. Gornto, Smith-Douglass Co., Norfolk, Va., former chairman of the fertilizer section, presents an honorary plaque to Curtis A. Cox, immediate past chairman. The inscription bears a commendation from the National Safety Council for the work done by Mr. Cox in furthering the cause of safety in the industry.

Croplife.

A WEEKLY NEWSPAPER FOR THE FARM CHEMICAL INDUSTRY

The regional circulation of this issue is concentrated in the Southern states.

Income Tax Exemption Seen As Farm Problem Solution

Even the politicians seem to be running out of solutions for the farm problem. They are rendered uncomfortably vulnerable by the obvious fact that nearly everything that proceedeth from the mind and imagination of man has already proceeded. There may be no more rabbits in the farm economist's hat. It seems necessary to go back to scratch and start the proceedings all over again. One scientist does exactly that, and comes up with a suggestion which perhaps has only the single fault of being too absurdly simple.

Throughout the history of farm-price legislation we have had a well-defined tendency to hypnotize ourselves with new schemes, and to prostrate ourselves before new names for old schemes. We have had export debentures, two-price plans, equalization fees, ever-normal granaries, surplus-disposal programs, soft-currency sales and soil banks. We have plowed under unwanted crops (still doing it, in fact), distributed food stamps, packed surpluses into school lunch boxes, murdered baby pigs. All were intended to do one or both of two things: to raise farm incomes, and to reduce the risks in farming. If these are indeed our goals, comments the economist who now speaks, why not achieve them directly and be done with government controls and government-owned surplus? The economist here quoted is William O. Jones of the Food Research Institute of Stanford University. He thus explains:

"If there is need to guarantee farmers a minimum income, and to assure them of generally more favorable incomes than they now have, this could be done quite simply through the income tax. To raise incomes of those farmers who produce 95% of all crops and livestock, all that is necessary is to grant them special income-tax exemptions, just as we do for the blind and for persons over 65. If it is desired to go further, and to put a floor under farm incomes, this could be done by deficiency payments made to all farmers whose net income is less than their total exemptions."

"It is not at all clear that subsidization of farmers' incomes is desirable—I would argue that it is not—but if the Congress believes it to be, this is probably the best way to accomplish it."

"The whole question of how well off farmers are, or how poor they are, is very much confused by the differences in living costs in farm and city, and by the presence in agriculture of some two million farms that produce only an insignificant part of total farm output. The Census now makes a distinction in its statistics between these two million farms, and the two and a half million commercial farms, but it does not give net income figures for each. By examination of other data, particularly data on value of farm products sold, however, we can arrive at a crude estimate that per capita income on the commercial farms is at least as high as it is for the economy as a whole. Commercial farmers, then, do not appear to need subsidizing, although some of the noncommercial farmers may."

"There is, of course, an easier, and quite possibly a cheaper way to do the whole job. If all that is desired is a two-thirds reduction of stocks of four commodities, if all we want is to get rid of \$4 billion worth of corn, wheat, cotton, and rice, this can be done at not too much additional expense by burning them or by dumping them into the nearest ocean. We would then at once cut storage costs by perhaps \$200 million a year, and would be saved the burden involved in administering the complicated reserve programs. Or, if destruction seems too awful to contemplate, Admiral Byrd suggests that we stock our farm surpluses in Little America, where cost of storage is almost zero."

"But is destruction so horrible, in a world that

has seen millions of dollars spent for airplanes that will not fly, that tears down multi-million dollar buildings to replace them with new ones, and that destroys and rebuilds highways, almost as soon as they are completed? Is it much different from turning back into waste land 40 or 50 million acres that could be used to produce food, feed, and fiber that would be consumed? For make no mistake, it would be consumed, just as the tremendous CCC stockpile would be consumed if it were not sterilized by act of Congress."

Perhaps, save for those who are dedicated welfare-staters, this reduces the whole matter to sheer absurdity, which could hardly have been Mr. Jones' intent. We must excuse him for reverting to the primitive in his thinking by assuming that he is under some scholastic compulsion to meditate mathematically. He still believes, as possibly our political Einsteins do not, that a straight line is the shortest distance between two points.

More People, Bigger Market For Agriculture, Industry

"By 1975, our population is expected to tick off 228 million, an increase over today's population of 160 million."

"This is a challenge to our entire industrial machine. Now the greatest in the world, it must become still greater if we are to maintain and increase our level of living."

"Sheer numbers of people alone do not assure prosperity. A look at the teeming masses of the Far East is evidence of this."

"But numbers of people are one of three requirements for growth—each indispensably related to the other. Given the people—the consumers—you also need resources—natural or otherwise. Thirdly, you need productivity. The type of productivity that flourishes in our way of doing business. Implied here, of course, is the need for investment dollars."

"On these three blocks rests our economy: resources, productivity, and people. With these three factors blended together in a climate of free competitive enterprise, population growth becomes economic growth."

"The further we progress, the more new things we develop and introduce, the greater our responsibility to the public. Their future is in our hands. It is more in the hands of industry and science today than it has ever been, and the irresistible surge of technological advance will make the country increasingly dependent on us and trusting of us."

"This is a recent development. Born perhaps with the Industrial Revolution, it began about the time Professor Malthus was explaining that population tends to outstrip resources and unless population growth is checked, poverty is inevitable. Today, Malthusian is just a word in the dictionary."

"In the process of reducing the Malthusian theory to an absurdity, we began to gather to ourselves by the very things we were doing, a genuine responsibility in many areas. That responsibility has snowballed in a most dramatic fashion."

"Virtually everything the economy requires in a material sense is related to the five basic needs of mankind: food, clothing, shelter, transportation and communication, and medication. Let's consider our industry against those basic needs."

"In foods the ultimate problem is more output per unit of land. In the long term this means continuing to improve productivity of machines, greater use of plant food and soil supplements, more effective and intensive use of pesticides, greater use of animal feed supplements."—Gen. J. E. Hull, president, Manufacturing Chemists' Assn. before American Chemical Society.



Croplife

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NBP

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CROPLIFE is a controlled circulation journal published weekly. Weekly distribution of each issue is made to the fertilizer manufacturers, pesticide formulators and basic chemical manufacturers. In addition, the dealer-distributor-farm adviser segment of the agricultural chemical industry is covered on a regional (crop-area) basis with a mailing schedule which covers consecutively, one each week, four geographic regions (Northeast, South, Midwest and West) of the U.S. with one of four regional dealer issues. To those not eligible for this controlled distribution Croplife subscription rate is \$5 for one year (\$8 a year outside the U.S.). Single copy price, 25¢.

LAWRENCE A. LONG

Editor

DONALD NETH

Managing Editor

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MEETING MEMOS

Nov. 30—Seventh Annual South Dakota Fertilizer Dealers Short Course, South Dakota State College, Brookings, S.D.

Jan. 9-10—Eleventh Annual Wisconsin Insect Control Conference, Sponsored by the Entomology Dept., University of Wisconsin, Loraine Hotel, Madison, Wis.

Feb. 19-20—Alabama Pest Control Conference and First Annual Meeting of the Alabama Association for the Control of Economic Pests, Auburn, Ala. W. G. Eden, Alabama Polytechnic Institute, Auburn, secretary-treasurer.

EDITOR'S NOTE: Listings above are appearing in this column for the first time this week.

Nov. 7—Fertilizer Manufacturers Conference, Iowa State College, Ames, Iowa.

Nov. 7-9—Agricultural Ammonia Institute, Annual Convention, Atlanta Biltmore Hotel, Atlanta, Ga., Jack F. Criswell, Claridge Hotel, Memphis, executive vice president.

Nov. 7-9—Pest Control Operators Short Course, Virginia Polytechnic Institute, Blacksburg, Va.

Nov. 7-9—Pacific Northwest Plant Food Assn., Annual Convention, Harrison Hot Springs Hotel, Harrison Hot Springs, British Columbia, Leon S. Jackson, Lewis Bldg., Portland, Ore., secretary.

Nov. 8—Ninth Annual Fertilizer Dealers Short Course, Iowa State College, Ames, Iowa.

Nov. 8—Technical Session on Phosphate Fertilizer Manufacture, at Midwest Regional Meeting of Chemical Engineering Section, American Chemical Society, Iowa State College, Ames, Iowa.

Nov. 9—Session for Fertilizer Industry, South Carolina Accident Prevention Conference, Jefferson Hotel, Columbia, S.C.

Nov. 11-13—California Fertilizer Assn., 33rd annual convention, Del Coronado Hotel, Coronado, Cal.; Sidney H. Bierly, executive secretary, 475 Huntington Drive, San Marino 9, Cal.

Nov. 12-14—Oregon Weed Conference, Pilot Butte Inn, Bend, Ore.

Nov. 12-16—American Society of Agronomy, Annual Meeting, Netherlands Plaza Hotel, Cincinnati.

Nov. 13-15—18th Annual New York State Insecticide and Fungicide Conference and 9th Annual Pesticide Application Equipment Conference, Bibbins Hall, Cornell University, Ithaca, N.Y.

Nov. 15-16 Washington State College Weed Conference, Pullman, Wash.

Nov. 16—Arkansas Fertilizer School, Sponsored by University of Arkansas and Plant Food Educational Society of Arkansas, Marion Hotel, Little Rock.

Nov. 19-20—Eastern Branch, Entomological Society of America, Hotel Haddon Hall, Atlantic City, N.J., B. F. Driggers, Rutgers University, New Brunswick, N.J., secretary.

Nov. 19-20—Ohio Pesticide Institute winter meeting, Neal House, Columbus, Ohio.

Nov. 27-28—Indiana Fertilizer Conference, Memorial Union, Purdue University, Lafayette, Ind.

Nov. 28—Oklahoma Fertilizer Dealers Conference, Sponsored by the Oklahoma Plant Food Educational Society, Oklahoma A&M College, Stillwater.

Nov. 29—Oklahoma Soils and Crops

Conference, Oklahoma A&M College, Stillwater.

Nov. 29—New Jersey Pesticide Dealers Conference, Rutgers University, New Brunswick, N.J.

Nov. 29-Dec. 1—Washington State College Ground Applicators Short Course, Puyallup, Wash.

Dec. 3—Sixth Annual Minnesota Soils and Fertilizer Short Course, Coffey Hall Auditorium, St. Paul Campus, University of Minnesota.

Dec. 6-7—Alabama Soil Fertility Society, Whitley Hotel, Montgomery, Ala.

Dec. 10-12—13th Annual North Central Weed Control Conference, Sherman Hotel, Chicago.

Dec. 12—American Society of Agricultural Engineers, Power and Machinery Section, in Cooperation with the National Joint Committee on Fertilizer Application, Edgewater Beach Hotel, Chicago.

Dec. 13-14—Soil Fertility and Plant Nutrition Short Course, University of Missouri, Columbia, Mo.

Dec. 13-14—Cotton Production Conference, The Titwiler, Birmingham, Ala.

Dec. 27-31—Entomological Society of America, Annual Meeting, Hotel New Yorker, New York City.

1957

Jan. 8-9—Texas Fertilizer Conference, Texas A&M, College Station, Texas.

Jan. 10-12—Northeastern Weed Control Conference, McAlpin Hotel, New York.

Jan. 21-25—Pacific Northwest Vegetable Insect Conference and Northwest Cooperative Spray Project, Imperial Hotel, Portland, Ore.

Jan. 23-24—Fourth Annual Pacific Northwest Agricultural Chemicals Industry Conference, Benson Hotel, Portland, Ore., Sponsored by Western Agricultural Chemicals Assn., C. O. Barnard, 2466 Kenwood Ave., San Jose 28, Cal., Executive Secretary.

Jan. 23-25—Southern Weed Conference, Bon Aire Hotel, Augusta, Ga.; Walter K. Porter, Jr., Agricultural Experiment Station, Louisiana State University, Baton Rouge, secretary.

Jan. 28-29—National Cotton Council of America, Annual Meeting, St. Louis, Mo.

Jan. 31-Feb. 1-2—Agricultural Aircraft Assn., Annual Convention, Senator Hotel, Sacramento, Cal., Wanda Branstetter, Route 3, Box 1077, Sacramento, Executive Secretary.

Feb. 4-6—Cotton States Branch, Entomological Society of America, Birmingham, Ala. W. G. Eden, secretary-treasurer, Alabama Polytechnic Institute, Auburn, Ala.

March 6-8—National Agricultural Chemicals Assn., Spring Meeting, Fairmont Hotel, San Francisco, L. S. Hitchner, 1145 19th St. N.W., Washington, D.C., Executive Secretary.

June 17-19—Fifteenth Annual Convention of the Association of Southern Feed and Fertilizer Control Officials, Dinkler-Tutwiler Hotel, Birmingham, Ala., Bruce Poundstone, Kentucky Agricultural Experiment Station, Lexington, Ky., Secretary-Treasurer.

June 26-28—Eighth Annual Fertilizer Conference of the Pacific Northwest, Benson Hotel, Portland, Ore. B. R. Bertramson, Washington State College, Pullman, Wash., chairman.

July 17-19—Southwestern Fertilizer Conference and Grade Hearing, Galvez Hotel, Galveston, Texas.



G. H. Anthony

NEW DIRECTOR—The Chase Bag Co.'s central art department, where printed brands for Chase bags have been designed since 1929, is now under the direction of G. H. Anthony, it has been announced by R. N. Conners, executive vice president. Mr. Anthony succeeds Burnam R. Jones, manager of the department since its beginning, who retires after over 25 years with Chase Bag. Mr. Anthony will continue the policy of maintaining a full-time staff of artists, typographers and engravers in one central location. Both stock and private brands are produced by this service, located in the firm's St. Louis branch at 5033 Southwest Ave.

Olin Mathieson Names New Plant Superintendent

BRUNSWICK, GA.—Kenneth L. Weeks, Jr., has been appointed superintendent of Olin Mathieson Chemical Corp. operations here, according to an announcement by James F. Newell, manager of operations of the company's industrial chemicals division, Baltimore, Md.

Now under construction, the Brunswick facilities are expected to be ready for use shortly after the first of the year. They will provide chlorine and caustic soda for use in the manufacture of insecticides and industrial chemicals.

Mr. Weeks joined Olin Mathieson in 1952 as a foreman at its McIntosh, Alabama, plant and was made purchasing agent at that location a year ago. He was previously with Allied Chemical and Dye Corp. at Huntsville, Ala.

INDEX OF ADVERTISERS

Classified Ads

Classified advertisements accepted until Tuesday each week for the issue of the following Monday.

Rates: 15¢ per word; minimum charge \$2.25. Situations wanted, 10¢ a word; \$1.50 minimum. Count six words of signature, whether for direct reply or keyed care of this office. If advertisement is keyed, care of this office, 20¢ per insertion additional charged for forwarding replies. Classified advertising rate not available for commercial advertising. Advertisements of new machinery, products and services accepted for insertion at minimum rate of \$9 per column inch. All Want Ads cash with order.

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CLASSIFIED ADVERTISING

PERSONNEL DIRECTOR

VANCOUVER—Malcolm A. MacAulay has been appointed personnel director of the chlorine-caustic soda plant of Hooker Chemicals Ltd. at North Vancouver, B.C. Now under construction, the \$12 million plant will be completed early next summer. The announcement is made by R. Lindley Murray, president of Hooker Chemicals Ltd.

DELAWARE CROP SHOW

DOVER, DEL.—The 48th annual Delaware crop show, sponsored by the Delaware Crop Improvement Assn., will be held Nov. 19-20 at the Capital Grange Hall in Dover.

Allied Chemical & Dye Corp., Nitrogen Division	11
American Potash & Chemical Corp.	
Anco Manufacturing & Supply Co.	
Ashcraft-Wilkinson Co.	17
Brughman Manufacturing Co., Inc.	
Baird, J. B., Co.	
Bemis Bro. Bag Co.	
Blue, John, Co.	
Bonneville, Ltd.	
Bradley & Baker	
Broyhill Company	
Butler Manufacturing Co.	13
Chase Bag Co.	
Commercial Solvents Corp.	
Davison Chemical Co.	
Deere & Co., Grand River Chem. Div.	
Douglas Chemical Company	
E. I. du Pont de Nemours & Co., Inc.	
Farm & Ranch	4
Flint Steel Corporation	19
Hahn, Inc.	
Hercules Powder Co.	
Hough, Frank H., Co.	
International Minerals & Chemical Corp.	
Johns-Manville Corp.	
Kent, Percy, Bag Co.	
Kraft Bag Corp.	
Meredith Publishing Co.	
Midwest Body & Mfg.	
Miller Publishing Co., The	
Minerals & Chemical Corp. of America	
Mississippi River Chemical Co.	
Monsanto Chemical Co.	
National Potash Co.	7
Naugatuck Chemical Div., U. S. Rubber Co.	
Nitrogen Div., Allied Chemical & Dye Corporation	
Olin Mathieson Chemical Corp.	2
Penick, S. B., & Co.	
Pennsylvania Salt Mfg. Co. of Washington.	
Phillips Chemical Co.	
Potash Company of America	
Private Brands, Inc.	
Rieke Metal Products Corp.	
Shell Chemical Corp.	
Sinclair Chemicals, Inc.	
Smith-Rowland Co., Inc.	
Spencer Chemical Co.	
Stauffer Chemical Co.	
Stewart-Warner Corp.	
Successful Farming	
Tennessee Corp.	
Union Bag-Camp Paper Corp.	
U. S. Phosphoric Products Division	5
U. S. Potash Co.	
U. S. Rubber Co., Naugatuck Chem. Div.	
U. S. Steel Corp.	
Velsicol Chemical Corp.	
Virginia-Carolina Chemical Corp.	24
Vulcan Containers, Inc.	

Boosting
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To produce the yields you want each crop you grow requires definite amounts of certain plant foods. Your soil contains some of these. The most economical and most profitable fertilizer for you is the fertilizer that makes up the difference between what your soil can supply and what your crop must have. That's why it pays to use V-C Fertilizers **precision-made** for your particular crops and soils. You avoid waste because you get more crop-producing power per dollar you invest. You get bigger yields at the lowest possible cost. This means more money in your pocket.

V-C Fertilizers are **precision-made** in the analyses recommended by your Experiment Station or Extension Service.

V-C Fertilizers are **precision-made** in combinations of plant foods to meet needs indicated by soil tests.

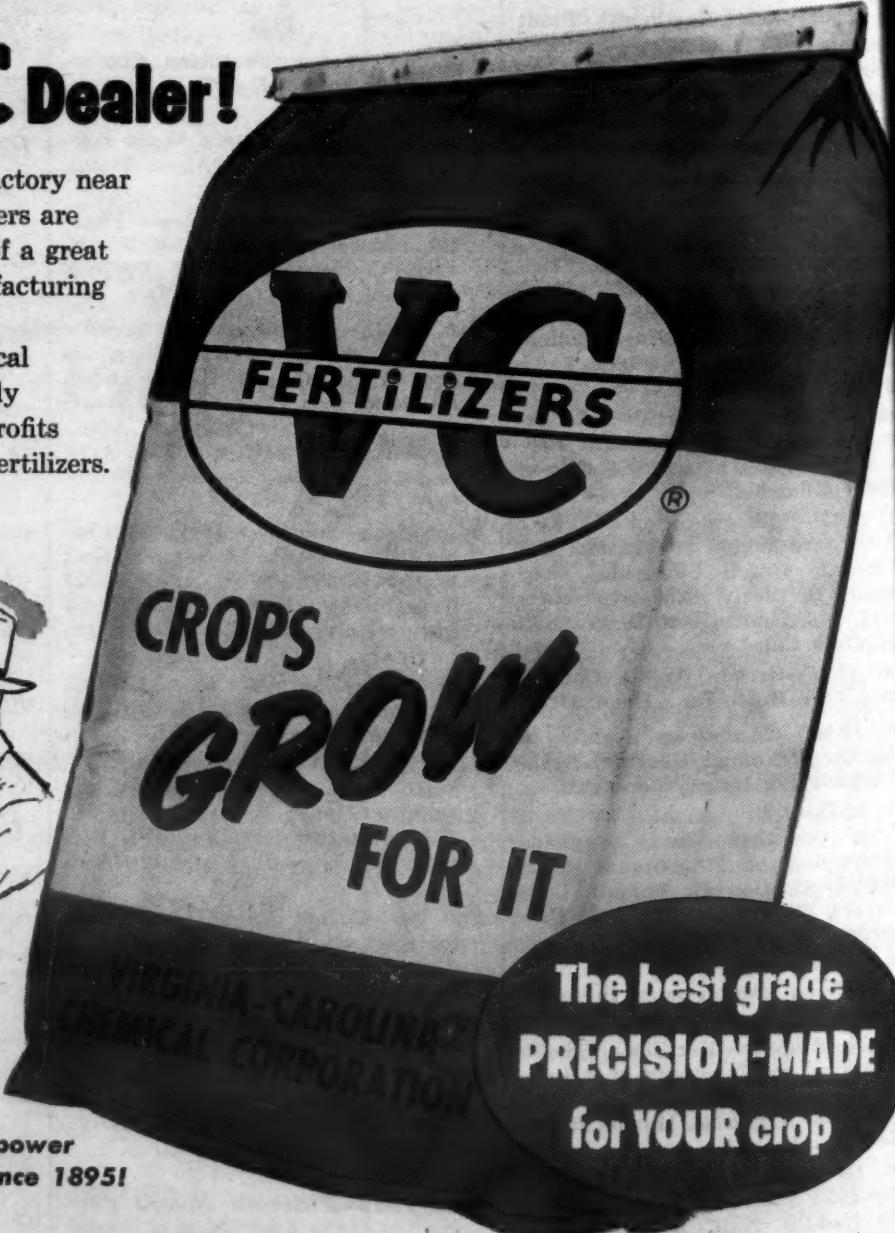
V-C Fertilizers are **precision-made** to include major plant foods plus secondary plant foods and minor elements.

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Precision-made in a V-C factory near your farm, your V-C Fertilizers are backed by all the resources of a great national organization. Manufacturing experience, technical skill, scientific research and practical farm know-how are constantly working to bring you more profits from **precision-made** V-C Fertilizers. See your V-C dealer today!



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